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FREEDOM AND EDUCATION IN A CORPORATE SOCIETY*

BY WILLIAM O. STANLEY

WE ARE LIVING TODAY IN THE MIDST OF A WORLD in which there are more real questions about the meaning and the future of freedom than at any time since the close of the seventeenth century. In sober fact the doubts have gone so far that a distinguished Justice of the Supreme Court of the United States recently suggested that the bill of rights, despite the sanction of a hallowed tradition, could not be reenacted in America today without a difficult and precarious struggle.

It may be readily admitted that there is more than one reason for these questions and doubts. But this paper is based on the premise that technological developments, in social organization as well as in mechanical invention, have created new conditions which require significant revisions in both the theory and the institutional structure of freedom. For more than two centuries, the prevailing conception of freedom has been couched in purely political and individualistic terms. Indeed, freedom has been defined simply as the absence of governmental restraint.

At bottom, this theory of freedom rests upon two significant propositions. First, that human affairs are ultimately regulated by immutable natural laws which, where governments do not interfere with their free operation, automatically result in a progressive and orderly advancement of human welfare. Second, that the natural individual is a solitary rather than a social being, that he is in no genuine sense dependent on society or its institutions, and that all social relationships are external, secondary and contractual arrangements in no way necessary to or constitutive of the self. Thus, society is a mere collection of autonomous individuals having no common social interests but only individual, private interests. Men may, in specific instances, find that they have mutual interests. But mutual interests, in this case, must be interpreted—not as conjoint, shared interests that bind men together in a common brotherhood—but as a simple conjunction, more or less temporary, of separate, private interests. Group activity in a free society, therefore, must be governed solely by the terms

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of free contracts created by the voluntary acts of private individuals. Hence, aside from the preservation of law and order, automatic adjustment and freedom of contract become the essential institutional conditions of free men.

Since 1880, however, corporate activity has progressively replaced individual decision and action in many spheres of human endeavor. The corporation has now become the predominant form of economic organization. But corporate activity is by no means limited to business enterprise. Organized group associations have permeated almost every sector of American life. James Truslow Adams, in fact, has observed that the corporation has engendered "one of the most sudden and colossal readjustments in human relations—social, economic and ethical—which society has ever undergone."[1] Not the least significant aspect of this revolution in human relationships is its impact upon the social atomistic theory of freedom. For in a complex, industrial society freedom in group activities cannot be defined in terms of a free contract, since this definition of freedom implies far too much or far too little. If it means simply that the individual may choose either to participate in the activity on whatever terms he can secure by his own unaided resources or remain out of it on pain of suffering the consequences of his refusal, it is but a travesty on the name of freedom. For in an interdependent, industrial society the necessities of life will compel many men to participate in group activities and to submit to social controls which from their point of view are essentially arbitrary. Indeed, in many respects it is sheer nonsense to speak of man's ability to refuse to participate in many of the most important group activities of modern life since, in fact, such participation is a necessary condition of life itself. If on the other hand, freedom of contract means that men are free in a group situation only when they are to act as they please individually, then obviously men cannot be free, except sporadically, in any collective activity since the coordination of individual effort is the essence of group action.

Since 1880, also, there has been—in every civilized nation on earth—an increasing tendency to substitute deliberate social planning and control for automatic adjustment. This trend has been variously explained. Professor Hayek and his allies have insisted that it is simply the evil fruit of socialist propaganda, aided by unfortunate efforts of business men to escape from the rigors of competition.[2] Professor Mannheim, on the other hand, has argued that the increasing complexity and size of modern society, coupled with the rise of large scale corporate activity, has made social planning inevitable.[3] Others have said that the trend is simply the result of the efforts of the common man, caught in the toils of a vast, interdependent, industrial society to secure some measure of control over the forces that govern the conditions of his life. But, whatever the cause, the existence of the trend itself—regardless of the party in power—is beyond dispute.

THE INADEQUACY OF SOCIAL ATOMISM

Professor Galbraith has recently asserted that the basic issue has already been decided—that the remaining controversies are primarily over matters of

[1] James Truslow Adams, *Frontiers of American Culture* (New York: Charles Scribner's Sons, 1944), p. 115.

[2] Friedrich A. Hayek, *The Road to Serfdom* (Chicago: The University of Chicago Press, 1940).

[3] Karl Mannheim, *Man and Society in an Age of Reconstruction* (New York: Harcourt, Brace and Company, 1940).

method, degree or timing or else merely the rear guard protests of those who are not compelled to face the responsibilities of power.[4] Certainly, it would now be difficult, if not impossible, to maintain that the trend towards large scale corporate activity has or will be reversed. Admittedly, the situation in the case of social planning is not as clear. In theory, at least, no one can say with assurance that the American people are irrevocably committed to the idea of social planning. Perhaps the precise reverse is nearer the truth. Yet it is reasonable to conclude that in actual fact, the trend toward social planning and control will continue. Short of atomic disaster, there is no reason to suppose that corporate activity will diminish or that the individual will become less dependent upon impersonal social forces over which, as an individual, he can exercise little or no control. As Mannheim has observed, after a certain point has been reached, increasing social density everywhere means that automatic adjustment must give way to deliberate social control. When the obscure corner is transformed into a great traffic intersection, the installation of stop-go lights becomes a social necessity.

Further, the social consequences of the private decisions of powerful organized groups are of a different order from those of a single individual. A considerable dislocation or disturbance in any major industry—almost in any major company—threatens, unless it is speedily resolved, not only to disrupt the entire economy, but also to disorganize the very life of society itself. A prolonged strike in a key industry provides a vivid example of this proposition. But in a greater or lesser degree, it holds for every major group decision. The forces operating in society today are so powerful, and the chances that a cardinal disturbance arising at any point will rapidly spread throughout the entire fabric of society are so great, that men can longer afford to depend on the unregulated pull and haul of the automatic process. The devastating effects of a major depression upon the private lives of millions of people, and on the social and political as well as the economic life of an industrial society, provides an excellent example of this principle. But its operation is by no means confined to the economic sphere. Indeed, all three aspects of the principle—the rapid ramification of any disturbance throughout an interdependent system, the ineffectiveness of individual effort in the face of the vast and impersonal forces which have been unleashed, and the accumulative social consequences of reliance upon automatic action and reaction—are perfectly mirrored by the sudden spread of certain agricultural pests and diseases, such as the giant snail or the Dutch elm tree disease, far beyond the native boundaries where until very recently they have been confined for centuries.

The argument could be massively buttressed by an examination of the specific problems, from workmen's compensation to dry rot at the heart of every major city, which step by step have forced a reluctant public to embrace a greater and greater measure of social planning and control. However, it is not my task to prove that a progressive resort to deliberate social control is inevitable. For the purposes of this paper, I am simply assuming that in practice that decision has already been made. Undoubtedly there are serious weaknesses in this approach, but there is also a great strength. For not until we recognize that corporate activity and social planning have in large measure replaced individual action and automatic adjustment, can we face squarely the central problem of our time—the problem of freedom in collective activity.

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[4]John Kenneth Galbraith, *Economics and the Art of Controversy* (New Brunswick, New Jersey: Rutgers University Press, 1955).

If the preceding analysis has any merit, it is clear that the social atomistic theory of freedom is inadequate for this purpose, for its essence is the opposition between freedom and social control. It is not simply that this belief has tended to delay the adoption of essential social controls, or even that it has militated against the development of the controls that have been adopted into a consistent and coherent system of public planning. It is rather that the belief that liberty and social control are inherently opposed has operated, in at least three distinct ways, to foster an authoritarian type of social control which is, in fact, inimical to freedom. It has, in the first place, blinded men to the extent to which corporate activity under the practices justified by the social atomistic theory of freedom has entailed coercive economic and social controls exercised by private agencies for private ends. It has, also, operated to prevent serious attention to the conditions of freedom in group activity and has thus exposed us to the very real danger of drifting unaware into autocratic and undemocratic methods of social control. And, finally, it has lead many, convinced that social planning is now necessary, to abandon their faith in freedom. In the present period it is well to note that the wholesale opposition of social planning and freedom, like that of security and freedom or equality and freedom, may prove to be a two edged sword.

Social atomism, of course, is simply a form of cultural nominalism. But, unfortunately, cultural realism as exemplified in the organic theory of society is fully as inadequate for the present purpose than social atomism. In its modern form, best stated by Hegel and Bosanquet, objective idealism has purported to resolve the conflict between freedom and social control. But it has done so by means of a conception of liberty which has reduced freedom to obedience to authority and has, as a moral end, subordinated the individual to the state. In line with its Platonic and medieval predecessors, Hegelianism has regarded the individual as a partial and fragmentary manifestation of a larger and more inclusive social personality—the nation—which because of its universal character is possessed at once of a higher degree of reality and of a greater moral worth than the individual. It has, moreover, endowed the nation with a mind and a will, other than and superior to (although inclusive of) the collective will of its individual members. True freedom, according to this theory, consists in subordinating the partial and imperfect will of the concrete individual to the perfect and comprehensive will of the nation which at once includes and transcends all individual wills. Finally, since the nation as a moral being speaks through the state, true freedom may be defined simply as submission to the commands of the state—a state, moreover, that derives its authority not from the people but from a moral entity which, while it includes the people as inferior and partial manifestations of its being, is superior to them. This theory is no more defensible in the light of modern social science than the social atomistic theory. If there is no scientific warrant for regarding man as an isolated being having only external relations to his fellows, neither is there any empirical warrant for endowing social groups with personality, mind, and will apart from and superior to the minds and wills of their members. Moreover, its practical implications are clear. Ordinary men and women are, in effect, told that they are to find both their freedom and their highest development in the most complete subjection to the commands of their superiors. The architects of this theory of freedom were neither fascists nor communists. Many of them, indeed, were liberal democrats. But it un-

doubtedly contains the seeds of totalitarianism. Hence it cannot serve as the intellectual foundation of a democratic theory of freedom.

THE RELATIONSHIP OF FREEDOM AND RESTRAINT

The fact is that all of our traditional theories of freedom, while they doubtless embody significant and hard won insights which we ignore only at our peril, are inadequate for the present purpose. The paramount problem, therefore, is the construction of a theory of freedom commensurate with demands of group decision and action. I do not mean to argue that freedom in a corporate society can be secured simply by the elaboration of a competent definition of freedom. But I am asserting that a valid conception of the meaning of freedom is essential to its preservation and extension under new and changing circumstances and conditions. "The World", said Abraham Lincoln in his Baltimore address, April 18, 1864 "has never had a good definition of the word liberty, and the American people, just now, are much in need of one". True then, his statement is far more true today.

One thing is certain. Our difficulty in formulating a satisfactory theory of freedom is not due to any dearth of definitions of the term. Rather we are suffering from a surfeit of diverse and contradictory conceptions of the meaning of freedom. Professor Malinowski, for example, cites no less than eight different definitions of its basic connotation.[5] To these must be added MacIver's insistence that, while we all know what freedom is, the term itself can neither be analyzed nor defined.[6] Nevertheless, Dorothy Fosdick has shown that despite the wide diversity all of the fundamental definitions of freedom contain a central or core meaning—the absence of all external restraint.[7] Even freedom regarded as absolute submission to law is premised on the argument that only through willing submission can we avoid external restraints and thus actualize our freedom.

Professor Malinowski grants that Miss Fosdick has successfully isolated the common element in all of what he terms the primary semantic definitions of freedom. Yet he rejects this concept as a valid element in the meaning of freedom on the ground that it posits a species of absolute freedom which, in a human context, is utterly unrealistic and hence meaningless. Further, he asserts, it is precisely this notion of freedom as the absence of all restraint which is responsible for most, if not all, of the semantic confusion which surrounds the idea of freedom. Like Dewey, although from a different approach, Malinowski insists that restraint and freedom are mutually related, the converse and obverse sides of the same coin. It is not, he says, the absence or presence, or even the quantity of restraints that decides the issue of freedom or bondage, but the function and quality of the restraints imposed.

There is much to be said for Professor Malinowski's position. The complete absence of all external restraints is a conception made for God, not for man. Moreover, freedoms and restraints are inescapably bound together, if only because my right to walk unmolested down the street necessarily entails the denial of your right to prevent it. Hence the absence of external restraint alone will not

[5]Bronislaw Malinowski, *Freedom and Civilization* (New York: Roy Publishers, 1944).

[6]Robert M. MacIver "The Meaning of Liberty and Its Preversions" in Ruth Nanda Anshen, *Freedom: Its Meaning* (New York: Harcourt, Brace and Company, 1940).

[7]Dorothy Fosdick, *What is Liberty?* (New York: Harper and Brothers, 1939).

yield a valid theory of freedom for this or any other time. Yet I must agree with Miss Fosdick that absence of external restraint is the core meaning in the concept of freedom. Restraints, however necessary, should be recognized for what they are. They are the price we must pay for the enjoyment of our liberties. But we do not confuse the price with the good itself. Further, in the construction of a theory of liberty, it is dangerous to do so. For a valid theory of human freedom involves a balance of the benefits and price; a balance, moreover, in which in specific instances, the benefits and the price are unequally distributed between different groups of people. In my judgment, the imposition of a graduated income tax in order to provide free public education for all children and youth would be justified under any valid theory of freedom. But we would not be justified in disregarding as an element of cost the restrictions which this legislation unquestionably imposes.

Professor Malinowski's criticism, however, does show that the core meaning must be modified and supplemented before it can be translated into an acceptable theory of human freedom. In the first place, as noted above, man is a finite being. As such, his freedom is never absolute and unlimited. He is restrained by his passions, his ignorance, the necessities of the situation and his fellow man. At best, he can only free himself from certain restraints. A competent theory of freedom, therefore, is always plural and specific. That is to say, it deals, not with freedom in general, but with specific freedoms. Consequently, extreme care must be used in the formulation of a theory of freedom. For, as Malinowski has suggested, if too little is claimed for freedom, ample scope is allowed for exploitation and oppression, while if too much is claimed, the enemies of freedom can show that it cannot exist or else that it is present in the worst of tyrannies.

Second, external restraints must be broadened to include certain internal restrictions on the exercise of freedom. A person suffering from serious personality disorders could not be said to be free in the full human sense of the term. Similarly, ill-considered action which disregards the claims of important parts of the personality is a serious limitation of freedom. The objective idealist's appeal to the more inclusive self is a sound concept, except for the fact that it identifies the inclusive self with a metaphysical entity above and apart from the flesh and blood individual.

Third, freedom always contains an element of power. Unless purpose can be translated into effective execution any claim for freedom is an empty and idle formula. This fact, along with the need for self examination noted above, is the reason for Dewey's frequent identification of freedom and intelligence. The inclusion of power as the means of execution in the concept of freedom is usually taken as the basic distinction between positive and negative definitions of freedom. This is not true, however, of the core meaning as isolated by Dorothy Fosdick. The absence of all external restraints includes the absence of the restraints imposed by the lack of necessary means. Miss Fosdick's formulation is stated negatively, but it can be translated directly into the popular and positive definition of freedom—to do as you please.

The inclusion of means in the definition of freedom, however, has been opposed by the advocates of the social atomistic theory of freedom. Powerful social philosophies are as much the product of the economic, social and intellectual forces operating in a particular culture as they are of the genius of the men who, by deed as well as by pen, made them a living reality. Hence, despite the universality of form in

which they are usually cast, all such philosophies retain an element of the particular, since they invariably reflect the needs and interests, not of all men and all classes everywhere, but of particular men and particular classes living in a given time and place. The original architects of social atomism were not heedless of means. Their defense of the rights of private property, in fact, was based in no small degree upon the importance of economic independence to the realization of freedom. But they lived in a time in which men, with considerable justification, regarded arbitrary governments as the chief enemy of human freedom. Accordingly, they constructed elaborate safeguards to protect both the individual and his property against legal interference or private violence. But as men of substance, they took little account of the limitations and coercions which other forms of social arrangements, ultimately enjoying the protection of law, might impose upon human freedom. The exclusion of means from the definition of freedom as the absence of governmental restraint was the product of historical circumstance and class interest rather than of any theoretical consideration. Certainly an age which has witnessed the ruthless brutality of modern totalitarianism should not under-estimate the importance of freedom from arbitrary and tyrannical government. But men's aspiration for freedom has never been limited purely to the political realm, and whatever else men may have sought in their long quest for freedom, they have not sought for empty husks devoid of substance. Without power there is no freedom.

Finally, freedom in the human sense is an attribute of culture. Man is inherently a social creature. Far from being endowed by nature, apart from human associations, with intelligence, personality and inalienable rights, he is, without the benefit of a culture built by countless generations of men living in society, little more than a mere brute devoid alike of language, reason, conscious selfhood or any sense of moral right. It is true that nature or nature's God has conferred on man potentialities not possessed by other members of the animal kingdom, but it is precisely because he is, as a member of social group, the heir to the cultural inheritance that he is able to actualize these potentialities, or that rights and obligations have any meaning for him.

He is, moreover, sustained and supported from the cradle to the grave, by the tools, institutions, customs, skills, attitudes and ideals of his social group. Stripped of these products of society, he is not a free man but a helpless wretch. As Malinowski has pointed out, material discoveries, such as fire, add to human freedom because they increase the range of what people can want, do and enjoy. But they also exact a price—submission to the norms of knowledge and the rules of skill. Similarly, various types of human organization and cooperation both expand the ambit of freedom and exact their price.

Hence, freedom and restraint are not only interdependent, they are also related to the social order. Every social order has its appropriate system of freedoms and restraints. In this sense, no society, however free, is exempt from restraints and no society, however tyrannical, is without its freedoms. In this connection it is important to note that subjective theories of freedom—feeling free—are closely related to cultural conditioning. Men frequently do not notice customary restraints, but they fiercely resent the withdrawal of established privileges and freedoms. On the other hand, men seeking new freedoms will bitterly attack restraints and limitations which were formerly accepted as a matter of

course. What men feel as freedom or as restraint depends upon where the shoe pinches.

A DEFINITION OF FREEDOM PROPOSED

The important point, however, is that a theory of freedom is essentially a choice between different social orders, each with its own system of freedoms and restraints. It is, in other words, an attempt to specify what freedoms and what restraints are most important for human life. In my judgment, those who assert that the final criteria of choice must be found in the nature of man are correct. The older natural law theorist, however, operated with an apriori conception of the nature of man which ignored the importance of both empirical verification and changing circumstances. More recently, the social sciences have fostered a species of cultural relativity which made any rational choice between divergent social orders impossible. But today the frontiers of social psychology, anthropology and sociology are moving in the direction of an empirically verifiable conception of human nature, which in time may give us a more certain standard of judgment.

Even in the present state of human knowledge, I am willing to venture both a definition of freedom and a list of specific freedoms which I believe can be defended on the basis of the quality of human life which they foster.

What then does freedom mean? In my opinion the answer to this question involves four distinct but related conceptions, each of which is an essential element in the meaning of freedom. First, and perhaps central, effective choice; that is, the widest possible degree of effective choice on the part of every individual in society. Second, growth; the presence of those conditions which permit and stimulate the fullest possible development of those potentialities of every individual which tend to expand rather than to narrow or limit his capacity to participate in and contribute to the common welfare. Third, participation; the right of every person to share, to the full extent of his capacity, in the goods of society. Fourth, reasonableness; the disposition to settle disagreements by the methods of study and discussion rather than by the application of force.

A general definition of freedom, such as the one just delineated, is important and useful because it can be employed in judging particular claims to liberty. But no general definition, however valid, can be substituted for the detailed system of specific freedoms and restraints embodied in a particular social order. Hence, a full definition of freedom in any society would require a complete enumeration of the choices which are, or should be, open to different individuals and groups in that society. Obviously, no such definition is possible in this paper, even if it were within the competency of the writer. Many of these specific freedoms and restraints, in fact, are properly relative to time, place and circumstance. A few however, are so directly and integrally related to the general definition which has been set forth, that it can be argued that they must be respected in any valid social order. Without making any claim that the list is exhaustive, these universal freedoms may be said to include:

(1) The basic legal principles usually associated with civil and criminal justice in English speaking countries, such as due process, the presumption of innocence, the right of habeas corpus, the prohibition on the use of *ex post facto* legislation in criminal proceedings, trial by jury, production and cross-examination of witnesses in open court, representation by competent counsel, the requirement that the prosecution establish an overt act or omission by positive evidence, the

right of appeal and review, freedom from arbitrary arrest and from unreasonable searches and seizures, the right of bail except in capital cases, etc., but specifically excluding the doctrine that men are vested by natural law with certain absolute property rights beyond the jurisdiction of society;

(2) The civil liberties—freedom of peaceable assemblage, speech, press, religion and the right of petition;

(3) The great political principles inherent in a democratic society—popular sovereignty, constitutional government in which the authority of governmental officials is defined by law and in which they are fully accountable to the law, frequent elections, universal and equal suffrage, an equitable system of representation based primarily upon population, a multiple party system which insures the right of any considerable group of citizens to organize and form a legal political party, full recognition of the right of minorities to criticize and, within the limits of the law, to oppose the acts of government;

(4) The right of the consumer, within reasonable limits, to select, from among a variety of commodities, those which he wishes to purchase;

(5) The right of the worker, again within reasonable limits, to choose his occupation, change his job and to participate in decisions affecting wages, hours and working conditions;

(6) A complete absence of physical, criminal, military or other "slave labor" devises in industrial discipline, except in cases of extreme emergency such as war, flood or fire;

(7) The right of all employees, including professional and governmental employees, to organize and bargain collectively; a right which necessarily entails the right to strike except in those cases in which the exercise of that right would directly, immediately and materially threaten public health and safety;

(8) The basic survival rights; freedom from fear and violence and, within the limits of the available resources of society, freedom from want and disease.

FREEDOM AND EDUCATION IN CORPORATE ACTIVITY

So far, very little has been said about the specific problem with which we are primarily concerned—the meaning of freedom in corporate activity. For Professor Malinowski, all human action is corporate action. "Within the really existing human societies, no man ever acts alone. He is always a member of a group, or rather of several groups: the family, the neighborhood, his professional associates, his municipality, his nation and his sovereign state."[8]

There is more than a grain of truth in Professor Malinowski's contention. As I have suggested earlier in this paper, man is a social creature. But, even so, there is a distinction between a personal and a corporate act; between, let us say, my choosing a novel for an evening's relaxation and the establishment by the University of Illinois of a rule governing the admission of freshmen to the University.

In the first case I make the choice. If I am a sensitive moral person I will, in making my choice, take into account the welfare, feelings and opinions of my family and friends. Further, as Bosanquet has conclusively shown in his criticism of John Stuart Mill, no act is ever entirely personal and private in its consequences.[9]

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[8] *Op. cit.*, pp. 34–35.

[9] Bernard Bosanquet, *The Philosophical Theory of the State* (London: Macmillan and Company, 1923).

Nevertheless, I do make the decision. And society, if it will, can, within broad limits, leave other individuals free to make their choice. In the second case, however, only one choice can be made, and once it is made it is binding upon every member of the University. There is always some scope for individual, personal decision on the part of the most humble member of any organized group activity. But these personal decisions, even in the higher ranks of an administrative hierarchy, are always governed and limited by a complex of impersonal, corporate decisions. To ignore or blur the distinction between these two cases will simply confuse the issue.

A free society, of course, will reserve and respect a broad area of private, personal decision. But it is a serious error to identify freedom with purely individual decision and action. If the achievement of purpose is an element of freedom, then it must be admitted that corporate action has, in some ways, extended human freedom. For there are results which can be achieved by organized group action which could not be achieved by the same persons working individually and separately. Executive efficiency can be bought at too high a price. But it is *one* of the elements of effective freedom.

Nor is the fact that corporate action involves a large measure of social control, in and of itself, a sufficient ground for the conclusion that the area of freedom must be equated with the area of personal, private action. For, as I have argued throughout this paper, social control can extend as well as restrict freedom. In fact, it usually does both. Most of us would agree, I think, that compulsory education is a form of social control which has operated on the whole to broaden the horizon of human freedom. Conversely, we would probably agree that a failure to regulate child labor or to build roads would result in a real limitation on our freedoms. Yet in both instances, certain freedoms have been restricted by other freedoms having been extended.

Freedom in corporate action, then, cannot be defined in terms of the presence or absence of deliberate social controls, but only in terms of the quality and consequences of the controls involved. I would add that these controls must be compatible with the general definition of freedom delineated above and that they must not negate or violate any of the specific freedoms essential to any free society. I would venture the suggestion that the following criteria of freedom in corporate action fully meets this test.

First, that every person involved in or affected by a collective undertaking must share, to the extent of his ability to do so, in the determination of the purposes of the enterprise and the means by which those purposes are achieved. Second, that the activities of the group, within the limits of its functions, must provide ample scope for the full development of the capacities and abilities of every person engaged in them. Third, that the equality of group association must expand the area of common interests and concerns. Fourth, that corporate or group action must operate to widen rather than to narrow the orbit of effective choice for all those engaged in or affected by them, except where the limitation of effective choice is the necessary result of the elimination of undemocratic economic or social power that enhances the freedom of a few at the expense of many. Fifth, authoritative leadership in the group must be based on the consent of the members, and those affected by its acts, as well as on the technical competence of the leaders. Further, both the authority of the various leaders and the rules

governing behavior within the group must be determined by the requirements of the tasks set by the purposes of the organization. Sixth, the rewards of the corporate activity must be shared equitably by all the members of the group. Equity does not mean exact equality. But it does mean the most nearly equal distribution consistent with the success of the activity.

I will concede that very few corporate groups now operate in full accordance with these criteria. But I do not concede that it is impossible or impractical for corporate bodies in the criteria as formulated. To the extent that they are concerned with freedom, they will move in some such direction.

The conception of freedom required in social planning is no different from that required in corporate activity. Indeed, corporate activity in so far as it is deliberate, intelligent action directed to achieve a conscious purpose, is social planning. But an adequate definition of freedom is only one of the conditions required for the actualization of freedom. Further, these conditions are at once more crucial and more difficult to maintain as the size of the group and the range of human interests involved in collective action are enlarged. It is an error to assume that social planning necessarily requires that all significant decisions be made by a central authority. But it is true that the broad outlines of general direction and policy must be centrally determined. Undoubtedly, a comprehensive system of social planning entails both very large groups and a very wide range of human concerns. For this reason, if for no other, it must be admitted that maintenance of freedom in the context of large scale planning and action is not an easy task.

But large and powerful groups are now engaged in extensive social planning and action designed to promote their own particular interests. Further, as a nation, we are increasingly adopting measures which can only be described as *ad hoc*, piecemeal social planning. Sooner or later we will be compelled to undertake some coordination and harmonization of the diverse, and often conflicting, public and organized group planning activities. At this point, of course, we will be face to face with social planning in a comprehensive and systematic sense.

As I stated at the beginning of the paper, I would agree with Mannheim that some such development is inevitable. If so, then deliberate planning for freedom is one of the most important conditions of the preservation and extension of freedom in a corporate system. It is a condition, moreover, which is, perhaps more closely than any other, related to the task of the education. I do not imply that the educator should indoctrinate students with the view that extensive social planning is desirable or inevitable. But I do suggest that, at the upper levels of education at least, attention should be devoted to the question of the conditions under which, if at all, social planning and freedom are compatible. I would suggest also that the school, at all levels, can develop in its students the knowledge, the skills and habits of action appropriate to freedom in corporate activity. In part, this can be accomplished through the usual procedures of classroom instruction. But for the most part it is a function of the way in which students participate in the life of the school. After all, the problem of freedom in the classroom and in the school is a special case of the general problem of freedom in group decision and action, as the efforts of the students, teachers, parents and the community to deal cooperatively with the problems of the school are a special case of the general problem of social planning.

DEMOCRACY AS A FUSION OF ENDS AND MEANS*

BY HENRY EHLERS

FUNDAMENTAL TO ANY STUDY OF MAN IS THE DISTINCTION BETWEEN MEANS AND ENDS, between the real and the ideal, between techniques and aspirations, between the realm of fact and the realm of value, between the world as it is and the world as we would like it to be. The relation of ends to means is particularly significant in connection with the two great ideals of democracy—the free individual and the open society. After a general consideration of the connection between ends and means, this paper will argue, first, that the primacy of the individual cannot be maintained as an end unless our society also maintains the means whereby those in power may be restrained, and second, that democracy and freedom as ends cannot be achieved by authoritarian or undemocratic means.

ENDS AND MEANS ARE LOGICALLY DISTINCT, BUT NOT ACTUALLY SEPARABLE

Means and ends are correlative aspects of civilized living, and nothing but tragedy can result when they become separated. Such a tragedy occurs when values and ideals are set apart in castles in the air, while the techniques by which they might be realized are reduced to a menial status—like poor relations, to be endured, but not inherently welcomed. Equally tragic is a situation where ideals and aspirations are ignored, where we know the price but not the value of things, where we pay homage to machines that think but condemn any man who tries to, or where we spend so much time with time-saving gadgets that we have time for nothing else. In any civilized community, means and ends are logically distinguishable, but they are not actually separable.

There is no better way to distinguish science from superstition than by asking to what degree means and ends are joined. The essence of magic is the assumption that results can be accomplished without the accommodation of human aspirations to physical conditions. We may shout "hocus-pocus" and wave a magic wand in the fond hope that words and wishes will bring results. But until we discover the operative conditions of nature we are indulging in magic or wishful thinking. In contrast to magic, a law of science states an invariant relation or connection between one state of affairs and another. "It signifies that *if* one is to attain a specified result, *if* one is to get the result with the maximum of efficiency, there are conditions having a necessary relationship to that intent."[1]

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We gain a better understanding of the doctrine of ends and means if we realize that no act is undertaken so intelligently that all of its consequences are perceived beforehand. Information acquired for one purpose frequently has its greatest significance in ways wholly unforseen. For example, when Galvani observed that frog's legs moved convulsively if brought in contact with iron and copper, he had no idea that his experiments would lead to the electric battery, the telegraph or the Atlantic cable. Yet, Galvani's discovery in physiology became a milestone in the development of electricity.[2]

The free exchange of information is indispensable to science and to democracy, not only as an end-in-itself, but as a method whereby reform may peacefully occur through the use of reason and persuasion. Recently our courts upheld the principle that no group can resort to force and violence as a means toward gaining its ends. In the decision which led to the conviction of Eugene Dennis and other leaders of the American Communist Party, Judge Hand declared that it will not help conspirators to argue that ". . . the objective of the conspiracy is lawful, and only the means contemplated are illegal. . . . One can hardly believe that one would be protected in seeking funds for a school, if he suggested that they should be obtained by fraud. His privilege would be conditional upon separating the means from the end."[3] Although American democracy grants every minority group the right to challenge and to dissent, ". . . the rules confine the conflict to weapons drawn from the universe of discourse."[4]

As a final illustration of the relation of ends and means we cite the recent Supreme Court decision outlawing racial segregation in education. The court asserted that "all men are created equal" is a fundamental principle of American democracy; and that in mid-twentieth-century America education is a primary *means* toward achieving such equality. Education *means* more in 1954 than it did in 1864. In fact, education means so much today that since ". . . separate educational facilities are inherently unequal," the doctrine of "separate but equal" has no place in the educational system of a society based on the equal rights of man.[5]

We conclude, then, that means and ends are, or should be, closely interrelated. Let us now apply this principle to the theory of democracy. We will affirm that democracy involves two basic ideals or ends, and that each of these is buttressed by appropriate means. The first end of democracy—individual

[1]John Dewey, *The Quest for Certainty* (New York: Minton Balch, 1929), p. 164. Compare John Dewey, *Human Nature and Conduct* (New York: Holt, 1922), pp. 25–37; Wilfred Sellars and Herbert Feigl, Editors, *Readings in Philosophical Analysis* (New York: Crofts, 1950), "Introduction," Morris R. Cohen, *Reason and Law* (Glencoe, Illinois: Free Press, 1950), p. 161 f; Fernand van Steenberghen, *Epistemology*, trans. by Martin J. Flynn (New York: Wagner, 1949), p. 259 f.

[2]For further elaboration of this point read Walter Gellhorn, *Security, Loyalty and Science* (Ithaca, N. Y.: Cornell University Press, 1949), Chapters 2 and 3; James B. Conant, *Science and Common Sense* (New Haven, Conn.: Yale University Press, 1951); Bernard Barber, *Science and the Social Order* (Glencoe, Illinois: Free Press, 1952).

[3]Judge Learned Hand, *United States v. Dennis*, 183 Fed. 2nd, 201 at 207 (1950).

[4]*Ibid*, p. 212.

[5]*Brown v. Board of Education*, 347 U.S. 483 (1954).

freedom—means freedom of the individual *from* governmental coercion and *from* excessive social pressures. A system of checks and balances by which governmental agencies and powerful pressure groups are kept under restraint is the means by which this end is realized. The second aim of democracy is the good life, or the life of reason, attained *through* social living. Open, unrestricted communication is the indispensible means, without which this end cannot be realized.

Democracy, we shall affirm, is a system which embraces two ideals: first, the protection of individual freedom and of minority rights against undue interference by the State or by thoughtless majorities, and second, the attainment of a reasoned majority opinion through group discussion. These ideals may be considered as complementary, or even as polar opposites. Sometimes the lone thinker or the dissenting minority needs protection from an intolerant majority. Sometimes the majority must protect itself from unruly minorities. It is very difficult to know precisely where to draw the line between the rights of the individual and the rights of the group, and in judging specific cases our courts may err on the side of leniency or on the side of harshness. But the central ingredient of democracy remains not doctrine but intelligence, not authority but reason, not cynicism but faith, not fear but confidence in our fellow humans. A free society cannot resort to the methods of a police state and remain free. If, out of fear or excitement, we use totalitarian *means* to attain democratic *ends*, we shall find in the long run that we will be "free" in the sense that the Soviets are "democratic."

INDIVIDUAL FREEDOM (END) AND RESTRAINT OF PUBLIC POWER (MEANS)

Consider the problem of individual freedom. It is generally agreed that the primacy of the individual is the core of our democratic faith:

> ". . . It is the faith that our collective fate in the end depends upon the irrepressible fertility of each individual, and the finality of what he chooses to call good. It is the faith that neither principalities, nor powers, nor things present, nor things to come, can rightfully suppress that fertility or deny that good."[6]

But in recent years this faith has been questioned. The widespread demand for "loyalty" on the part of civil servants, and increasing pressure for conformity on the part of public school officials, signifies a growing fear of diversity. Many seem to believe that our national unity may be threatened if individuals are given full freedom to advocate so-called dangerous or heretical views. We all realize, of course, that both Fascists and Communists espouse the doctrine that the State should use force and propaganda to uphold its basic ideology. They interpret freedom to mean freedom to think the *right* thoughts—which means freedom to think as the rulers think. For them, the official opinion comes first, and the man and his private conscience nowhere. Freedom means freedom

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[6]Irving Dilliard, editor, *The Spirit of Liberty: Papers and Addresses of Learned Hand* (New York: Knopf, 1952), p. 154.

For other materials included in this section, the writer is especially indebted to the following: Archibald MacLeish, "Freedom is the Right to Choose," *Atlantic* 188: 27–30, November 1951; Bertrand Russell, *Unpopular Essays* (New York: Simon and Schuster, 1950), Chapter 1; Gustave Weigel, "The Church and the Democratic State," *Thought: Fordham University Quarterly* 27: 165–184; Charles R. Nixon, "Freedom vs. Unity: A Problem in the Theory of Civil Liberty," *Political Science Quarterly* 68: 70–87, March, 1953 (bibliography).

to be like everybody else, to conform to the dominant political party, to accept the prevailing ideological pattern of the group.

If the ideology occurred only in its extreme totalitarian form, the problem would hardly merit consideration, since there are relatively few outright Fascists or Communists in this country. But there are many Catholics, some Protestants and Jews, and even an occasional free thinker, who will argue that perhaps a wee bit of authoritarianism may be needed at home if American democracy is to survive. The argument rests on the assumption that any society is held together by an orthodoxy of belief, or by certain "fundamental principles". In its religious form the argument runs somewhat as follows: Democracy is a moral community. Such a community is based on moral truths. These moral truths are the truths of religion. Hence any doctrines or expressions which challenge or deny these fundamental truths should be repressed.

Is this the turn American democracy is to take in our time? Is this so-called "moral" argument consistent with our democratic heritage? I think not. For a study of history shows that democracy is *not* based on agreement concerning fundamental principles—unless the *priority of men to principles* is called such a principle. In the American tradition, the individual man and his private beliefs are primary; the established opinions and the official views are secondary. During the past three hundred years America has harbored numerous and conflicting groups, each of which was generally willing to proclaim that its particular outlook was "fundamental", "eternal," and "absolute," and that the welfare of our entire society depended upon others coming to accept that particular point of view. These groups tolerated other groups, not because their *principles* required it, but simply because there was no other way of behaving in a multi-group society consistent with public order. The agreement to disagree is seldom an expression of fundamental principle; it is a pragmatic choice.

In a free society, men learn to cooperate and live together in spite of the fact that many so-called "fundamental issues" are unsettled. Indeed, the history of the 17th and 18th centuries shows that democracy arose out of the religious, economic and class conflicts of the time. Because minorities feared for their own vital interests, they had restraints placed on government, and saw to it that issues of vital and personal interest were removed from the sphere of public policy. After several generations in which men of different faiths dwelt and worked side by side in conquering the frontier and building a new nation, men learned that they could work together constructively in spite of basic differences of belief. They became tolerant because in a pluralistic society there was nothing else to do.

The history of our national experience in this respect is one in which every American takes just pride. It is the story of the cooperative endeavors of white, black, brown and yellow races; of Protestant, Catholic, Jewish, Oriental, humanistic and even atheistic religious outlooks; of German, French, Polish, Greek, Chinese and other nationalities. All of these races, religions and nationality groups have contributed to our multi-group society. It is not in spite of such diversity, but because of it, that we are one people. We gladly rally behind the government because it has not roused our hostility by repressing our cherished faiths or our private prejudices. However diverse our ideologies may be, we

work together to protect ourselves from fire, flood, famine, and disease; to build roads, bridges, hospitals and schools; and we play together in music, art, sports and recreation. For example, a Catholic may differ with a Protestant concerning the authority of the pope; he may differ with a Jew concerning the divinity of Christ; and with an atheist concerning the existence of God. Yet these four men may work together in perfect harmony on numerous economic, political, social, scientific and educational endeavors. It is the very *absence* of an official view which makes it possible for people of divergent ideologies to freely join together in common undertakings.

If our democratic society is to be considered a moral community—and surely it is, for every social group has its "mores" or accepted manners of behavior—its moral objective is the realization, not so much of a particular moral *code*, as of the full development of the *free individual.* Though the church and the school may guide the individual, neither the church or the state can secure such an end for him. The choice of the road to this end must be his own. Whether it be the self-proclaimed I-Am movement, or a cult of Indian mystics, whether it advocates single tax, vegetarianism or polygamy, each and every group is permitted to preach and teach its views and to win or lose adherents in the free market-place of ideas. What the state enforces is not a belief in a particular moral law, but obedience to those laws governing social relations which have won the consent of the majority of the community. The basis of democratic unity is a common willingness to accept decision by consent, not agreement on doctrines, and this willingness rests not only on the existence of common political and economic interests, but rests equally on the removal of certain issues from the area of politics. It is precisely because our nation maintains our freedom to differ in matters of *personal* belief that we all willingly unite behind its *public* policies.

Thus freedom of the individual is the end of democratic government, and restraint of power is the means by which that end is realized.[7] This restraint is enforced because we believe that all men have equality with respect to the right to believe, to inquire, to hear and to advocate; and that control of such powers can never be delegated to any one faction or group. To prevent our government from becoming dictatorial, we have adopted the system of checks and balances, which provides a balance of power among the legislative, executive and judicial branches of government; among federal, state and local authorities; between church and state, and between public and private interests.[8] This aspect of democracy has been well stated by the late Mr. Justice Jackson:

> The very purpose of a Bill of Rights was to withdraw certain subjects from the vicissitudes of political controversy, to place them beyond the reach of majorities and officials and to establish them as legal principles to be applied by the courts. One's right to life, liberty and property, to free speech and free press, freedom of worship and assembly, and other fundamental rights may not be submitted to vote; they depend on the outcome of no election.[9]

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[7]Walter Lippman, "The Indispensible Opposition," *Atlantic* 164: 186–190, August, 1939. Compare John Fischer, "Unwritten Rules of American Politics," *Harper's* 197: 27–36, November, 1948.

[8]Speaking in terms of the large 20th century units of labor, capital, manufacturing, transportation, farming and consumer groups, Galbraith has recently restated this doctrine as the "theory of contravailing power." Read John K. Galbraith, *American Capitalism: The Concept of Countervailing Power* (Boston: Houghton, 1953).

[9]*West Virginia State Board of Education v. Barnette,* 319 U.S. 624, 638 (1943).

CRITICAL RATIONALISM (END) AND OPEN COMMUNICATION (MEANS)

Yet elections are important. And this brings us to the second element of democracy: the principle of government by reason. Let us note in the first place, that reason does not reside in any super-State or Hegelian Absolute. Reason resides only in the minds of individual men and women. In a free society no group may claim an exclusive pipeline to the Eternal. Hence, when we stress reason, we are again stressing the primacy of the individual. However much lip service authoritarians may give to rational and humane values, the very fact that they do not permit individuals the right to choose their own sets of values should provide a clue to the democratic meaning of the word "reason".

In Aristotle's *Politics* may be found not only a defense of the rational life as an end-in-itself, but also a clear statement why majority rule is a means to rational living in a social community. Aristotle said we should submit to the decision of the majority not because that decision represents the *will* of those numerically stronger, but because a majority opinion represents the *judgment* of more people, and the judgment of the many is likely to be superior to the judgment of a few. Here Aristotle clearly connected the end (rational living in society) with the means (majority rule established on the basis of free and open discussion).[10]

Dictators mistakenly suppose that they do not need the opinions of dissenting groups. They try to dispense with opposition. They imprison, exile or shoot their opponents. The democracies, on the other hand, have learned on the basis of a long experience dating back to the Magna Carta and before[11] that opposition is indispensable. The democratic viewpoint is nicely summarized in the British phrase "Her Majesty's *loyal opposition*." To totalitarians, the terms "loyal" and "opposition" are contradictory: "How can anyone who opposes the government be loyal to it?" they ask. But democracies encourage criticism and dissent, and even pay public salaries to elected representatives of minority groups. For in a democracy, majorities may become minorities without any loss of rights; and minorities may become majorities without any added privilege. To still the voices of any of its people is to undermine the basic foundation of democratic unity—freedom of the individual citizen. The state may indeed compel obedience to laws which have won the consent of the majority of its citizens. But these laws are always open to challenge and revision. The majority is not a fixed group but a fluctuating one, and the possibility always remains open for the minority to become the majority by argument and persuasion.

Free discussion means open communication. "The significance of communication may be glimpsed when we note that man emerges as man with speech, civilization with writing, and the modern world with printing, science, public education and all the media of instantaneous and mass communication.[12] The very world "civilization" derives from "civis" meaning "city", where travellers and traders from various cultures meet, intermarry and learn to examine and

[10]See Aristotle, *Politics* in *Works*, tr. by B. Jowett, Vol. X, 1286a 10f. See also John H. Hallowell, "The Meaning of Majority Rule," *Commonweal* 16: 167–169, May 23, 1952.

[11]Read Zechariah Chaffee, Jr., "Freedom of Speech and Press" (Pamphlet prepared for the League of Women Voters), The Carrie Chapman Catt Memorial Fund, Inc., New York, 1955 (contains bibliography).

[12]George Axtelle, "Should Communists Be Allowed To Teach?", *The Educational Forum*, 15: 242, January, 1951.

criticise their diverse traditions and beliefs. When men are thus brought face to face with their opponents, when they are forced to listen and learn and restudy their traditions, then men cease to be children and develop rationality and humanity, the basic virtues of any civilization. Out of such discussion gradually emerges a body of common opinion, which in Roman civilization was called "natural law" and which today is called "pragmatic agreement."[13] This body of common thought or action transcends divisive boundaries, and serves as a glue to combine otherwise intransigent groups. Paraphrasing Edwin Markham's poem "Outwitted," Horace M. Kallen has expressed the social side of democracy and science as follows: ". . . other ways of thought and life draw circles which shut the different out, as heretics, rebels, and things to flout, but democracy and science are the methods that win, for the circle they draw brings the differences in."[14]

In saying that democracy rests on reason and humanity, we are saying that democracy is a modern social instrument for maintaining and extending the oldest and most cherished values of civilization. From the days of Buddha and Confucius, Solomon and Zoroaster, Plato and Aristotle, Hillel and Jesus, reason and humanity have been the values which men have employed to measure the advance or decline of civilizations. They are of such obvious value that they need no justification. No one finds it necessary to justify a reasonable or a friendly act by insisting that it is really a form of intolerance and brutality. But when governments resort to coercion, the justification is always that the apparent evil is a means of achieving a greater and ultimate good. Even the Hitlers and Stalins, the Francos and the Torquemadas, in order to win support for their ambitions, find it necessary to do lip service to reason and humanity.[15]

Democracy need not wait for a philosopher-king before these values may be realized. In a free society each of us wears a crown—but each of us also shares the burden of civic responsibility. It is not enough to feast idly at the banquet which our ancestors have prepared for us. We must also discipline ourselves in critical analysis and reconstructive thinking. Old ideals must be reinterpreted in terms of new technics. Traditional values must be restated in terms of the new means at hand. Only when ends and means are thus recombined will our democratic heritage remain the same though ever changing—*semper eadem sed aliter*.

If democratic education can encourage each oncoming generation to be fearless and imaginative in its thinking, to express differences of opinion in an atmosphere of mutual respect, to strive for rational and humane values by means of the democratic methods of argument and debate, and to avoid the totalitarian methods of fear and repression—then perhaps our multi-group society may provide a pattern and an inspiration from which a new world order may emerge; and we, its members may find joy and confidence in the faith that we are instruments of peace and understanding.

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[13]It is also called "practical intelligence." Read R. B. Raup, G. E. Axtelle, K. D. Benne and B. O. Smith, *The Improvement of Practical Intelligence*, especially Chapters 6 and 11, New York: Harper, rev. ed. 1950.

[14]Horace M. Kallen, *Democracy's True Religion* (Boston: Beacon, 1951), p. 10.

[15]Unfortunately, such double-talk can also be found in contemporary America. For specific examples, read Robert M. Hutchins, "The New Orthodoxy," *New Republic* 132: 14–16, Feb. 7, 1955.

CONCERNING THE ABANDONMENT OF A CERTAIN 'DEWEYAN' CONCEPTION OF METAPHYSICS

BY MARCUS BROWN

METAPHYSICS IS OFTEN DESCRIBED BY MODERN PHILOSOPHERS as the attempt to develop the widest possible generalizations on human experience. Whitehead speaks of

> "the metaphysical question, what is there in the nature of things, whereby an inductive inference, or a judgment of general truth, can be significantly termed 'correct' or 'incorrect'?"[1]

There is a correspondence between the attitude just expressed and that behind a recent treatment of Dewey's notion of *involvement*.[2] Taking this notion to be the chief problem of an empirical metaphysics, Professor Albert Hofstadter made some proposals "Concerning a Certain Deweyan Conception of Metaphysics," in the symposium volume *John Dewey: Philosopher of Science and Freedom*.[3] In this paper we will raise some questions as to the correctness of Mr. Hofstadter's interpretation and examine its empirical orientation in the light of certain conditions of the inquiry process as treated by Dewey.[4]

Consequent to the 'Hofstadter-Deweyan' conception, metaphysics is given the role of laying the general ground of significance, with the specific aim of the discovery of the general nature of the world of actual existence. Mr. Hofstadter's contention is that

> "Inquiry aims at settling the significances of things; the significances of things rest upon the involvements of things; a general theory of involvement is needed to guide inquiry and to serve as background for criticism; this general theory is the theory of the nature of existence, or metaphysics."[5]

The main argument specifically documenting the above claim is as follows: *Involvement and sign-signified*, which are existential relations, are closely related by Dewey but not made identical; involvements being understood as conditions of the possibility of sign-signified relations. From this it follows that existents

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[1]Whitehead, Alfred North. *Process and Reality* (New York: The Macmillan Company, 1929), p. 303.

[2]As set forth in Dewey's *Logic: The Theory of Inquiry* (New York: Henry Holt and Company, 1938), p. 54n, p. 278 *seq.*, p. 311, p. 330. See also *Connections* and *Inference*.

[3]Hofstadter, Albert. "Concerning a Certain Deweyan Conception of Metaphysics." *John Dewey: Philosopher of Science and Freedom*. Edited by Sidney Hook (New York: The Dial Press, 1950), pp. 249–270.

[4]In *Logic: The Theory of Inquiry*, *op. cit.* (Dewey).

[5]Hofstadter, *op. cit.*, p. 249.

are related by involvement generally, that the involvements of things are *not* characteristic products of inquiry, and that it is due only to the involvements of things that the making of reliable signs, the aim of inquiry, is possible; involvements being causally independent of their occurring within inquiries. This is said to demonstrate that Dewey's "theory that existence as such is characterized by involvements" ("connective realism")[6] is not abandoned by making inquiry concerned with the outcome of problematic situations ("logical instrumentalism")[7] rather than with "fixed traits of actual existence."[8] Only with a connective realism as a basis is Dewey's logical instrumentalism held to be sensible. Unless this is accepted, it is argued, existence becomes independant of inquiry and it is not possible to fix existentially the significance of things validly. The performance of an act does not mean that we *make* those aspects of existence whereby the act can be accomplished. What is true and important, it is held, is that we test to see if significances have been properly assigned. Mr. Hofstadter is *not* suggesting a specific world hypothesis, nor even one that is logically necessary to inquiry. He *is* suggesting that a theory of involvement structure developing out of cumulative inquiry, which would constitute a theory of the structure of existence, would serve to formulate general canons of inference. Seen in this light, as a general theory of existence, metaphysics is held by Mr. Hofstadter to be an important part of philosophy. Suggestions in this regard are appropriated from Dewey's discussion of metaphysics in *Experience and Nature.* Thus, it is held that the specific aim of metaphysics is to discover and to formulate "the generic traits manifested by existences of all kinds without regard to their differentiation into physical and mental."[9] Mr. Hofstadter remarks that "philosophy is more than a theory of the nature of the existential world because it involves commitment to values, their pursuit and ordering."[10] By an empirical discipline whose aim it is to discover the nature of nature, he means an inqury "to discover what ultimate kinds of contexts there are in which items are connected by involvements, and how these contexts are related among themselves."[11] His thesis seems to be that "*To know is to grasp validly existences in their relations, i.e. in their involvement structures.*"[12] This notion is held to stand at the center of both theory of knowledge and metaphysics. The investigation is resolved into a restatement of the supposed need for understanding how to determine involvement relations relevant to metaphysical inferences.

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[6] *Ibid.*, p. 262.

[7] *Ibid.*, p. 263.

[8] *Ibid.*, p. 262.

[9] *Ibid.*, p. 267. On page 249, Mr. Hofstadter says, "I shall not discuss the actual metaphysics which Dewey has written in *Experience and Nature* and which he has employed in so many other investigations; nor shall I discuss the question whether and how far that system is in accord with or fulfills the task to be outlined." Such discussions are needed, however, to establish Mr. Hofstadter's interpretation of Dewey's metaphysical commitments. If there is a metaphysical "system" in *Experience and Nature* (and in many "other investigations"), it would seem that the 'Deweyan' conception referred to in Mr. Hofstadter's paper would be 'part' of that *system.* If so, no treatment of this 'Deweyan' conception could be sufficiently pervasive that avoided introducing the discussions referred to by Mr. Hofstadter as having been omitted. We may be excused from pursuing such treatment here, however, because we are concerned only with showing the conflict of Mr. Hofstadter's conception with the inquiry process (that is, relevant conditions thereof).

[10] *Ibid.*

[11] *Ibid.*, p. 269.

[12] *Ibid.*

We have now summarized Mr. Hofstadter's main position and before proceeding further, to a closer examination of his argument, would like to make some general comment on his metaphysical orientation and its relation to Dewey's philosophy. That is, before attempting to demonstrate that Mr. Hofstadter misinterprets Dewey's use of the term 'involvement', we will suggest that the former's position lacks sufficient empirical commitments.

HOFSTADTER'S METAPHYSICAL ORIENTATION

In the first place, to think of metaphysics as a general theory of existence and to examine Dewey in this vein is already to approach him in a state of confusion; from Dewey's point of view, that is. If we have in mind the verification of the non-particular, then we are dealing with assumptions about which no intelligible questions may be asked. Even if we cannot always find the sources of human vitality in problems of determinate kinds, it does not follow that we are justified in approaching existence as if there were some ultimate mystery to be revealed by a general understanding of things. Secondly, to investigate the relations of existences is not the same thing as an investigation of the contexts in which existences occur. That is to say, *involvement itself*—mere existences in their relations, for Mr. Hofstadter—*is not a context.* If existences are related *by* involvement generally, they are related *in* a context specifically. What evidence is there, what can it mean to say, that if we knew the way *by* which involvements *can* occur that we would know the kind of contexts *in* which they *could* occur? Similarly, what worthy mode of intelligence dictates that if we knew the ultimate kinds of contexts in which existences could be related that we would know how these contexts are related among themselves? Here again is a phenomenon which may be found where the speculative metaphysical spirit abounds—whereby pronouncements that should be reserved as judgments, as the outcome of inquiry, are proclaimed prior to investigation. It is one thing to know in advance of inquiry what it is that we are looking for, but it is quite another thing, and certainly out of keeping with the spirit of inquiry itself, to suppose that what we are looking for, when found, will be the 'final' and 'ultimate' structure of things, enabling us to infer 'things as they really are'—and not merely as tools that enable the furtherance of inquiries and the construction of judgments that have existential reference. And, thirdly, the attempt to lay the general ground of significance as a development of ideas expressed in Dewey's *Logic: The Theory of Inquiry* is not in keeping with the general aim of that work as Dewey expresses it and as is fundamental to the theories that he proposes. Namely, Dewey is concerned with the question of what happens when logical thinking is applied to ordinary affairs. What difference does this type of thinking make? Can we get a knowledge of the structure of things and existence? Dewey's answer to these questions is that we *can* get a knowledge of the structure of *things* and *existences*; meaning by this a way of acting *upon* or *toward* a *thing* or *event* which makes a difference to further inquiry. If by 'the structure of existence' is meant anything different from this, such as, for example, the general ground of significance, Dewey would insist that his theory of inquiry offers no aid in the solution of this type of question (except in a negative sense, of course). He would indicate that his point of view involves a criterion for effectiveness which is based in full on purposeful inquiry. Questions about the structure of existence do not seem to meet the requirements of problematic formulation.

The question persists—Who will be so bold as to *identify* cases of involvement structure and then attempt an analysis of what is thus identified? We suggest that attempts at describing generic traits of existence are not presently intelligible. Such attempts seem open to the charge of substituting speculative metaphysics for empiricism. If this charge be avoided, it is more difficult to see how the charge of rationalism can be avoided; for it is no more valid to argue that the general nature of the world of actual existence is the legitimate concern of an empirical metaphysics than it would be to maintain that an empirical metaphysics is not possible for an empirical philosophy. At any rate, metaphysics cannot be viewed as a groundmap of criticism unless a systematic theory be proposed, having an existential context, that does more than substitute one empirical notion for another where either are obtainable by common modes of inquiry that are presently respectable. It is not clear, if we are to understand that the 'Hofstadter-Deweyan' conception deals with the possibility of talking intelligently about empirical notions, just what areas these notions deal with that the naturalist can regard as proper ground for investigation. They would have to deal with our common-sense experience. Whether such experience is adequate to cope with whatever is meant by "a general understanding of things"[13] is a demonstration that has yet to be convincingly made (and it is surprising to find some contemporary naturalists, particularly those of the Dewey school, *looking for the wider horizons of ultimates*—at least there seems to be no other way of properly describing their aspirations). The 'Hofstadter-Deweyan' attempt to state a notion that "provides the background for the search for wisdom"[14] does not enlighten us either as to the need of or as to the validity of metaphysics. If its direction is not antiempirical, it is at least less empirical than it confesses to be.

What, then, of the notion of *involvement*? Mr. Hofstadter asserts at the outset of his article that the development of "a general theory of the 'involvements of things' may be appropriately conceived as the chief problem" of an empirical metaphysics. Several factors suggest the inappropriateness of addressing the matter in this way. It is clear that those empiricists (for example) who would make of metaphysical inquiry a study of the leading heuristic and/or eristic concerns of science, or a study of the antiquated science of yesterday, etc., would not be inclined to acknowledge the notion of involvement as a problem for metaphysics at all. Further, since the meaning of a problem lies in its reference to a possible solution, there is serious doubt that the notion of involvement, as possessing metaphysical implications, is sufficiently qualified to be properly regarded as a problem by anyone who engages in inquiry of an empirical sort. However, we *might* qualify *involvement* for inquiry by giving it the status of a *situation*, inferring thereby that this notion is as yet indeterminate, precognitive, confused (in the sense that its outcome cannot be anticipated), and may or may not be susceptible to inquiry. It should be noted, too, that *mere* uncertainty is not sufficient to provoke inquiry. The priority of *involvement* in metaphysical inquiry remains so unsettled that to claim for it the status of "the chief problem" of such inquiry is to honor it above its station. But we have to show more decisively that this is so, and for this purpose we turn to an examination of the consequences

[13] Hofstadter, *op. cit.*, p. 270.

[14] *Ibid.*

for the notion of involvement (in metaphysics) that are claimed by Mr. Hofstadter to follow from his distinction between *signification and involvement.*

'INVOLVEMENT' IN HOFSTADTER AND DEWEY

Mr. Hofstadter's discussion of Dewey's notions of a "sign" and "significance" takes up the two sections of his article following his introductory paragraph. The discussion takes up more than one-half of the entire article. Its purpose is to emphasize the way in which Dewey understands the signified relation to be existential and also to stress the predominant role in inquiry of the signifying function. Included is an analysis of the *situation* (Dewey's term) in inquiry that is uncommonly clear—though it does not seem to have been applied by Mr. Hofstadter in setting forth *involvement* as *the chief problem* of an empirical metaphysics. The interpretation of Dewey's exposition of the place of the signifying function in inquiry is most acceptable. It is used to support Mr. Hofstadter's interpretation of involvement, especially the consequences that are said to follow *from signification for involvement*—and it is here that the main attention of this paper will rest.

Our objections to the consequences referred to above are based on what we believe to be a disregard for the logical import of involvement. Stated fully, the consequences (three), as given by Mr. Hofstadter, are as follows:

> "First, whereas an existent functions as a sign only within an organism-environment situation, existents are related by involvement generally, both outside and inside organism-environment situations. For instance, the contact of an acid and a base may, in a given inquiry, be taken as a *sign* of the occurrence of a process of neutralization, but acids and bases may also interact so as to neutralize each other even if this process does not occur in an inquiry; they are *involved* in a chemical interaction 'outside' (in causal independence of) inquiry.[15]
>
> Second, whereas the signifying functions of things are *characteristic products* of inquiry, the involvements of things are not. Thus the contact of acid and base is *made* into a sign of a process of neutralization by inquiry; but the fact that acids and bases combine to neutralize is not made by inquiry. In an inquiry we can make an acid come into contact with a base, but after that it is the acid and base that do the interacting, and will do so, if in proximity, even if there were no inquiry in progress.
>
> Third, it is only because there are involvements of things which are causally independent of their occurring within inquiries that inquiry can do what it aims to do, make reliable signs. Unless acid and base reacted in a characteristic way, we would not be able to use the conjunction of acid and base as a valid sign of a process of neutralization. This, I believe, is what Dewey means when he says that involvement is a relation *in virtue of which* the evidential relation (or, I think we should say, valid signification) is possible. I think he means that we should have no good reason for believing that the contact of acid and base validly signifies the occurrence of neutralization unless we had reason to believe that it was a characteristic trait of the interaction of acid and base that it issues in neutralization. (The converse also holds.) It cannot, of course, be true that the reason

[15] *Ibid.*, p. 261.

> why acids and bases neutralize is that we have simply *decided* to make the conjunction of acid and base a sign of neutralization. Existence is malleable, but only because there are existential involvements which can be exploited for the purpose. In transforming existences we do not transform the basic involvement relations in virtue of which the transformation is possible."[16]

Herein lies the basic error of Mr. Hofstadter's exposition. We suggest a general answer to the 'consequences' named and shall qualify it afterwards with some remarks on the way in which Dewey intended involvement to be understood. *What is not, or cannot be, a characteristic product of inquiry cannot be known by inquiry—where by a characteristic product is understood anything which is operationally productive in, or demonstrable by, inquiry.* Further, to answer Mr. Hofstadter's examples, *we cannot say that a certain process of interacting would take place* (*or* would *not* take place) *unless this process had had its possibilities previously ascertained—as a characteristic product of past inquiry.*

Mr. Hofstadter introduces his discussion of *involvement* with the following assertion.

> "Dewey introduces the words 'connection' and 'involvement' (as synonymous) in order to designate 'that kind of relation sustained by *things* to one another in virtue of which inference is possible!" (*Logic*, 55)[17]

But is this correct? Are "involvement" and "connection" to be taken synonymously? Actually, "connection" is first introduced by Dewey to describe what is attributed by the representative capacity of "natural signs," as distinct from "artificial signs" whose meanings depend not upon things as they are connected but on social agreement or "symbols."[18] It is next used with "involvement" "to designate that kind of relation sustained by *things* to one another in virtue of which *inference* is possible."[19] Then, we find in Dewey:

> "On their bare face, existing conditions do not tell what their consequences will be. We have to investigate connections—usually that of cause-effect. Connections are then formulated in abstract generalized conceptual propositions, in rules, principles, laws."[20]

And, elsewhere:

> "Existential subject-matter as transformed has a temporal phase. Linguistically, this phase is expressed in narration. But all changes occur through interactions of conditions. What exists co-exists, and no change can either occur or be determined in inquiry in isolation from the connection of an existence with co-existing conditions. Hence the existential subject-matter of judgment has a spatial phase."[21]

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[16] *Ibid.*, p. 262.

[17] *Ibid.*, p. 259.

[18] Dewey, *op. cit.*, p. 51.

[19] *Ibid.*, p. 55.

[20] *Ibid.*, p. 173.

[21] *Ibid.*, p. 220.

What is meant here is merely that where interaction (as a connective condition) is temporal-spatial it exists for judgment (for the conditions and possibility of judgment). Now, let us turn, for a moment, to Dewey's 'formal' distinction of *involvement.*

> "Inference is conditioned upon an existential connection which may be called involvement."[22]

It should be clear that while Dewey does mean *connection* to be an existential relation, both *interaction and involvement* are meant; and not as synonymous with, but as kinds of, *connection(s)*. *The Index of Logic: The Theory of Inquiry lists 'interaction'* and *'involvement' as references under 'connection'*. Connections have an interaction and an involvement phase for inquiry. This becomes clear when there is a sufficient regard for Dewey's footnote on page 278 of *Logic: The Theory of Inquiry*. It reads:

> "I owe the word 'involvement' and explicit recognition of its *logical import* [italics not Dewey's] as the conjugate counterpart of *implication* to Dr. Percy Hughes. See his article, 'Involvement and Implication,' *Philosophical Review*, Vol. XLVII, (1938), pp. 267–274. He was kind enough to show me the manuscript in advance of publication."

Dewey uses *involvement* and *implication* to explain, respectively, (1) that the inferential function is the determination of the distinguishing traits that describe kinds (Or, as Mr. Hughes puts it on page 269 of his article, "*Two or more* factors in a situation are involved with each other in so far as each is both distinct and yet uneliminable from the other."), and (2) that what is thus inferred constitutes a possible *mode of predication*, "But it never attains the status of inherent logical necessity"[23] (Or, as Mr. Hughes says on page 274 of his article, the logic of implication "looks toward a system of propositions based on postulates"[24]). Mr. Hughes, as does Dewey, makes *involvement* merely reciprocal of "is involved in," and not equivalent to *implication.*

> "Inference from involvement then is quite distinct from inference in involvement. . . . if we confuse the interrelation of things with their mutual involvement, and thus presuppose involvement to be transitive, then nothing is irrelevant to anything, and therefore relevance cannot be significantly asserted between things. The logic of involvement is a logic of relevance, and must firmly rest on the non-transitivity of the relation 'is involved with'".[25]

Involvement presupposes a non-transitive significance. Further, Mr. Hughes clarifies the situational meaning of *involvement* and *implication.*

> "There we have, not classes of objects, but a list of the factors that are involved

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[22] *Ibid.*, p. 278.

[23] *Ibid.*, p. 279.

[24] Professor Hughes makes his inquiry in "Involvement and Implication" akin to Dewey's "Characteristics and Characters, Kinds and Classes" and "What are Universals," *The Journal of Philosophy*, XXXIII, 7 and 21 May 1936, pp. 253–261 and 281–289.

[25] Hughes, Percy. "Involvement and Implication." *The Philosophical Review*, XLVII, May, 1938, p. 268. Mr. Hughes' inquiry is said by him to have been stimulated by Professor Brand Blanshard's "What Does Whitehead mean when he says 'involves'" (*Process and Reality*, 10, 25, 33).

> with each other in any situation, and therefore are a minimum range of adequate observation and speculation in dealing with any situation."[26]

Therefore, we see that to speak of "connection" alone, apart from its specification as an interactive or involvement condition, is not to indicate any logical relevance —it may be thought of in terms of a condition that is as yet (at the time of observation or thought) indeterminable as to its degree of transitivity. "*Connection without involvement*" thus becomes an intelligible state—as a stage *in* the inquiry process as well as *without*. All things may be connected with other things—all things may act upon other things and may be acted upon—but not all things may be said to interact with every other thing—and *involvement* is the special kind of interaction that is significant for the inferential process. *In order for connection to be synonymous with involvement, it would have to be the case that all interactions be composed of causes and situations that, upon analysis, can be shown to bear relevance in any given inquiry.* In such a case, we could only properly conduct *an* inquiry when we are in a position to know more than *inquiry* presupposes. There are, of course, connections; but these are, when found, originally mere existential conditions that must be investigated in order to learn further about consequences of states of existence. *All* connections are simply not relevant to inquiry—only *some* connections are relevant to any given inquiry. To find *a* connection is not necessarily to find *involvement.*

The above should sufficiently justify the uniqueness of *involvement* to the inquiry process. We believe that it has been demonstrated that the reading of *involvement* as being synonymous with connection was an erroneous approach to the formulation of a possible 'Deweyan' metaphysics. We may now return to the consideration of *characteristic products* of inquiry.

HOFSTADTER'S METAPHYSICS INAPPROPRIATE TO DEWEY

We are now in a position to see that what Mr. Hofstadter meant by *involvement*—namely, *any* existential connection—is rightly *not* a *characteristic product* of inquiry. What is critical here, and this point was completely avoided

[26] *Ibid.*, p. 274. Though Mr. Hughes does speak of "the metaphysics of involvement," he clearly does not ascribe to involvement any metaphysical status. One must, however, conclude that while Dewey means involvements to be the determining and distinguishable characteristics of existential connections that make inference possible, and while Hughes' usage can be translated into experimental terms, the latter's derivation of the involvement condition is from a rationalist source and strongly suggests a dependence upon its source (though not made explicit, it is in no way rejected). On page 269 of the Hughes article, there is a footnote after the sentence "Two or more factors in a situation are involved with each other in so far as each is both distinct and yet ineliminable from the other," which suggests the comparison of the sentence with Whitehead's doctrine of "coherence" (*Process and Reality*, pp. 5–6). "Coherence," for Whitehead, is used as a condition of his conception of Speculative Philosophy ("Speculative Philosophy is the endeavor to frame a coherent, logical, necessary system of general ideas in terms of which every element of our experience can be interpreted."—p. 4), meaning "that the fundamental ideas, in terms of which the scheme is developed, presuppose each other so that in isolation they are meaningless" (p. 5) (the "scheme," of course, refers to his philosophy of organism). For Whitehead, the rational ideal of Speculative Philosophy is expressed by the terms "coherence" and "logical." The notion of data being meaningless in isolation has its warrant from both the experimental and the 'speculatively coherent' points of view—for different reasons. The translation of *coherence* into *involvement* is not *per se* unwarranted. A certain extension of Whitehead's doctrine of coherence into the area of experimental inquiry can be fruitful—and has been, as in Dewey's adoption— though schematic contexts are often incompatible.

by Mr. Hofstadter, is whether or not *the conditions for inference*, when properly presented and certified, are *characteristic products* of inquiry! In this sense, involvement must be regarded as a characteristic product.

There is a sense, however, in which it is proper to speak only of the *contents* of judgments as the characteristic products of inquiry. This may, perhaps, be the best approach. The contents of judgments would then include the basis of inference at all points in the inquiry process. Hence, whatever is given for judgment would be regarded as a characteristic product of inquiry (that is, whatever is *taken* for inclusion in the content of judgment). From the point of view of Dewey's formulation in *Logic: The Theory of Inquiry*, *all involvements* (*connections relevant to inquiry as conditions of inference*—taking this definitively) would be so regarded.

Our conclusion is that Mr. Hofstadter is incorrect in thinking that the signifying functions of things are characteristic products of inquiry and that the involvements of things are not. We can make a temporal distinction within the inquiry process between *involvement* and *sign-signification*, whereby the former makes the latter possible. But we cannot find out "what conditions are involved with one another and *how* they are involved" outside of inquiry.[27] Mr. Hofstadter is confusing his metaphysical ambitions with the *logical possibilities of involvement* when he asserts that "*To know is to grasp validly existences in their relations, i.e. in their involvement structures.*"[28] If, then, our claim be the case, and involvements are uniquely and justifiably oriented to inquiry, being apart from inquiry and prior to recognition as involvements only non-signified (but not necessarily non-significant) existential conditions, it makes no practical sense, on a empirical level,

> "that the aim of metaphysics, as a general theory of existence, is the discovery of the basic types of involvements and their relationships."[29]

to say if *connection* and *involvement* are synonymous, Mr. Hofstadter's hopes for metaphysical enlightenment might have more substance. But if this synonymity is, as we have sought to establish, logically and practically impossible, Mr. Hofstadter cannot count on inquiry (or, at least, this aspect of inquiry) to *point up* existences relevant to his aim of metaphysics. If metaphysics is not to be equated with the aim of science, some more restricted subject-matter than involvements and their relationships must be indicated. Under the "Hofstadter-Deweyan" view, metaphysics is made to be a general theory of existence. But the area of existence to be investigated is not formulated sufficiently so that one can say anything significant about the subject-matter or the importance of the problem to be solved.

We do not see, at this time, how the sort of empirical metaphysical inquiry that Mr. Hofstadter suggests is to play a meaningful role in the search for knowledge. We are not saying that it cannot do so—but only out of the generosity of a logical heart. We do assert that it will have to abandon efforts to discover the nature of nature or the general nature of the world of actual existence or the constituent structure of nature—where it cannot demonstrate a subject-matter

[27]Dewey, *op. cit.*, p. 278. It is here that Dewey inserted his footnote on the Hughes article (after the sentence quoted).

[28]Hofstadter, *op. cit.*, p. 269.

[29]*Ibid.*

(*Continued on page 75*)

ISLAMIC CONTRIBUTIONS TO EDUCATIONAL METHODS

BY A. ARASTEH

Principles of Educational Methods

KNOWLEDGE IS AN ESSENTIAL OF FAITH FOR EVERY MOSLEM. Superiority of one person over another is based primarily on virtue and knowledge. The *Koran*, as it is, invites every human being to learn, and Mohammed makes knowledge necessary to every male or female. He also encourages the Moslem to seek knowledge even though it be far away. There are many verses in the *Koran* on the significance of knowledge, on the superiority of the learned, and on the importance for faith and daily life.

"There is a sign in it for a people who reflect, who ponder, who are mindful, who are men of understanding, and who use their intellect."[1] This stage of personality in Islam is based upon learning; a learning which includes the whole nature of man.

> Allah is He who Created the heavens and the earth and sent down water from the clouds, then brought forth with its fruits a sustenance for you, and He has made the ships subservient to you, that they might run their course in the sea by His command, and He has made the rivers subservient to you. And He has made subservient to you the sun and the moon pursuing their courses, and He has made subservient to you the night and the day. And He gives you of all that you ask Him; and if you count Allah's favors you will not be able to number them; most surely man is very unjust, very ungrateful.[2]
>
> And He has made subservient for you the night and the day and the sun and the moon, and the stars are made subservient by His Commandment; most surely there are signs in *this for a people* who ponder; and what He has created in the earth of varied hues; most surely there is a sign in this for a people who are mindful. And He is who has made the sea subservient that you may eat fresh flesh from it and bring forth from it ornament which you might seek of His bounty and that you may give thanks. And He has cast great mountains in the earth lest it *might be convulsed with you*, and rivers and roads that you might go aright, and landmarks; and by the stars they find the right way. Is He then who creates like Him who does not create? Do you then mind?[3]

These verses explain how the whole of nature would be useful to man and how a good knowledge of the elements and the laws of nature are necessary.

For the same reason Mohammed gave the following injunctions:

> He dieth not who takes to learning. Who ever reveres the learning reveres me; to obtain education is incumbent on every Moslem, male and female. Seek after knowledge though it be available in China. To listen to the words of the learned

[1] *Koran*, III.
[2] *Ibid*, xiv 32, 33, 34.
[3] *Ibid*, xvi 12–17.

> and to instill into others the lessons of science is better than religious excess. The ink of the scholar is more holy than the blood of the martyr. He who leaves home in search of knowledge walks in the path of Allah. Acquire knowledge. It enables the possessor to distinguish right from wrong; it lights the way to heaven; it is our friend in the desert, our society in solitude, our companion when friendless; it guides us to happiness; it sustains us in misery; it is an ornament among friends and an armour against enemies.[4]

This principle made the acquisition of knowledge a sacred duty with a Moslem. Assisting this principle, the Koran also suggested quite a number of ways of acquiring knowledge. In other words, the following methods are suggested in the Holy Book: (1) Man's attention was drawn to the art of reading and writing. In the very first revelation of Mohammed, when speaking of God, the Koran says: "Read in the name of God . . . who teaches man to write with the pen, who teaches him things, he knew not before."[5] (2) The importance of the senses was mentioned in many verses and it is pointed out that man can raise his intelligence through his senses. (3) It is noted that one should use his past experience for the future guide of learning. (4) Many verses indicate the importance of observation of the universe. It is noted that one should travel with an open eye observant of the nature, the relics, and the remains of those nations that rose and fell in days gone by, as is shown in the following verse: "Men of understanding are those who reflect on the creation of the heaven and the earth, and say, thou hast created this in vain."[6] This verse also indicates the importance of reflective thinking and it shows the significance of the purpose of the universe. (5) Case-history and biographies are two other ways that one may learn. History is taken by the *Koran* as a field that everyone should ponder, for it is stated: "Have they not then journeyed in the land and seen how was the end of those before them?"[7] (6) Learning lessons from hardships and trials, from Divine Revelation, contemplation and meditation are also mentioned in the *Koran.*

Four different words are used to convey each sort of contemplation. Each of these has a certain meaning. It is difficult to denote the proper equivalent words in English. An attempt at interpretation is made below; the words are:

(1) "Tafagguh"
(2) "Tadabbur"
(3) "Tafakkur"
(4) "Ta a'qul"

The first word, "Tafagguh," means to use all organs of knowledge. Khwaja-Kamal-ud-din specifically mentions the senses, both external and internal, and observation and experience as the means to acquire the truth of thing.[8]

"Tadabbur," the second word, means to observe things and to know the cause of their existence. As Khwaja-Kamal-ud-Din explains it, "Tadabbur" means "to understand the ins-and-outs of things that come within our cognizance."

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[4]Khwaja Kamal-ud-Din, *Islam and Civilization* (Lahore: The Working Moslem Mission, 1931), pp. 53–4.
[5]*Koran, op. cit.*, xvi, 13.
[6]*Ibid.*, xv, 14.
[7]*Ibid.*, xvii, 10.
[8]Khwaja Kamal-ud-Din, *op. cit.*, p. 86.

The third word, "Tafakkur" means constant pondering over a matter in order to reach the root of it. "Tafakkur" in the modern sense means observation and the study of nature to discover the laws of nature.

The fourth word "Ta a'qul" means not only a knowledge of the properties of things in nature, but also their use and the purpose for which they are intended to be used.

Besides these ways, many verses in "the book" stimulate, encourage, and order man to do reflective thinking, to reason, to contemplate, and to pay attention to nature. Also included are many attributes of God such as: (1) "Alim," meaning all-knowing, (2) "Alim-l-ghayb," meaning one who knows hidden and unseen things. (3) "Latif," meaning one who possesses more minute insight into other things, (4) "Hakim," the word is derived from the infinitive "Hikmat" which means science and wisdom, (5) "Basir," one who with an open observant eye sees things in order to acquire knowledge and experience, (6) "Sami," means all-hearing and (7) "Khabir," means one whose source of information has no limit. Such a source possessed by man enables him to be a good citizen.

With this background the Moslems became acquainted with these sources of knowledge in the academy of Jundishapur.* They also became acquainted with the Aristotelian works through Nestorians in Asia Minor. Then as a result, they developed the scientific methods of learning, invented new instruments of scientific research, and as Kamal-ud-Din explains, contributed the following:

(1) They renewed and improved scholastic philosophy which had been abused by Hellenic vanity and paralyzed by the grossness of the Romans.

(2) They systematized mathematical science.

(3) They cultivated natural and experimental knowledge to which neither the Greeks nor the Romans had attached any value.

The Moslems also did great service to medical science in all its branches; and while non-Moslems went to the Shrine of one saint or another to be cured of their ailments, the Moslems went to hospitals for treatment. Hospitals and asylums with capable nurses and able physicians spread everywhere in the early Moslem Empire. In Bagdad alone there were 864 licensed physicians. Hospitals for animals were also founded. Medicine and pharmacy were greatly advanced. Chemistry and algebra, astronomy and trigonometry, botany and optics, were all either invented or advanced by Moslem learning. The sciences of agriculture and navigation also were greatly elaborated. The remains of the Moorish occupation in Spain today are eloquent of the wonderful system of irrigation introduced

*Jundishapur is located in Southeast Iran. It was built in the fourth century A.D. and became the center of Iranian knowledge. The great king Chosroes Nushirawan (531–79 A.D.), known as the just, made the city the most important intellectual center of the time in which Persians and Syrians taught the basic knowledge of the previous centuries. Although the Arabs conquered Iran, the Academy of Jundishapur continued to be the scientific center of the New Islamic Empire. The same king gave refuge and entertainment to the seven neo-platonist philosophers whom the edict of Justinian had driven forth from their Athenian home. After closing the Pagan schools in 529 A.D., the same king made it a condition of his next treaty with the Romans that they should be allowed to return thither and remain unmolested. The Neo-platonist philosophers in Jundishapur met Syrians, Persians, and Indian sages. Thus arose a scientific syncretism which later became important for the development of Islamic thought. Khosroe sent his own physician to India in search of medical books which he translated from Sanskrit into Pahlavi, that is: Middle Persian.

here by the Moslems. Egypt too, in the first Moslem Century, had under cultivation an area five times as great as the present one. The cotton plant and sugar-cane were first introduced into Europe in these days. The weaving of silk and cotton, the printing of calico and the dyeing of stuffs were a few of the arts developed to a high pitch of perfection by the Arabs. They not only manufactured glass, but they knew how to embellish it both within and without. Even aviation was attempted in the days of Al-mamun, but Abu l-casin, the first inventor of the flying machine, crashed when flying and was killed.[9]

The teachers usually were capable organizers. They were able to organize the subjects logically, classify and enumerate them. They had positive minds and taught the subjects in terms of their practical use. For instance, arithmetic had to serve the needs of commerce and the division of estates. The professor sat with his back to a column, or on a high stool, and around him gathered a circle of disciples. This was called the learning-circle. There were numerous learning-circles which dealt with different topics. The methods of lecturing and conversation were used very often. The practicability of the method depended upon the subject which was taught. For instance, in teaching chemistry, a few words on the methods which were used by the first chemist, Jabir,* would be appropriate. He was broad in his scientific outlook and insisted upon the necessity of experiment and observation. Thus on one occasion he said:

The first essential (in Chemistry) is that thou shouldest perform practical work and conduct experiments. For he who performs not practical work nor conducts experiments will never attain to the least degree of mastery. But thou, O, my son, do thou experiment so that thou mayest acquire knowledge.[10]

In another case he made the following remark:

It must be taken as an absolutely rigorous principle that any proposition which is not supported by proofs is nothing more than an assertion which may be true or may be false. It is only when a man brings proofs of his assertion that we say "your proposition is true."[11]

The following specimen of Jabir's methods of preparing chemical substances, indicates his scientific outlook. The quotation is from his *Great Book of Properties* which is preserved in the British Museum and quoted in the book, *The Great Chemists:*

Take a pound of litharge, powder it well, and heat it gently with ⅛ of wine vinegar until the latter is reduced to half its original volume. Then take a pound of soda and heat it with ⅛ of fresh water until the volume of the latter is halved. Filter the two liquids until they are quite clean, and then gradually add the solution of soda to that of the litharge. A white substance is formed which settles to the bottom. Pour off the supernatant water and leave the residue to dry. It will become a salt as white as snow.[12]

[9] *Ibid.*, p. 56.

*Jabir, from an Arab family was born in Tus, Iran in the year 749 A.D. He set up his laboratory at Kufa, in Iraq and worked at the court of Barum in Bagdad. He was exiled in his eighties and died in 813 A.D.

[10] Eric John Holmyard: *The Great Chemist* (London: Methusen & Company, 1928), p. 14.

[11] *Ibid.*, p. 14.

[12] *Ibid.*, p. 15.

Jabir by his insistence upon the experimental method made many important discoveries, established chemistry as a science, and emphasized the scientific method of learning-teaching as well as thinking.

Another great exponent of the scientific method was Al-Razi.* He frequently used his consulting hall as his class room. He rarely used the method of lecturing. He treated his patients by the help of his pupils and guided them in learning. He constantly made notes of significant points. His students also made notes from which to learn.

> He was a man with a big head; like a casket, and he used to sit in his consulting hall surrounded by his pupils. The most advanced of these sat next to him in a circle, and in an outer circle sat the more elementary. When a patient came, he described his symptoms first to the elementary students, and if they understood the case they dealt with it. If not, the man passed on to the advanced students, and if the case was too difficult for them (one wonders if this ever occurred), then Razi dealt with it in person.[12]

In the light of the above quotation one can see how Razi was superior in his method of teaching and how he was in favor of learning by practicing, experimenting and observing. He himself was a skilled and ingenious experimentalist, and a keen observer. Therefore, he guided his students in the same method of learning. He was the first to contribute a clear and useful classification of chemical-substance and believed in systematizing knowledge. The same methods and scientific outlook are shown in the discovery of new plants and drugs which were produced from them. For instance, the physicians cultivated botanical gardens in which they introduced rare medical plants which they brought back from their travels.

Turning from medicine to the study of astronomy, again, progress was evident in the light of scientific methods and the scientific instruments.

A number of observers set out from the point of a meridian. Some went to the north, others to the south, until they had seen the polar star rise and sink one degree. Then they measured the distance, traversed and took the means of the results. Like observations were taken scientifically at Baghdad and Jundishapur. An observatory was established near Baghdad, the Shammasiya gate. Another was built by the Iranian scientist, philosopher and statesman, "Nasir-al-Din Tusi" (1199–1274) at Maragheh, northwest of Iran, another again at Samarghand, northwest of the Caspian Sea. From these observations, experimentations, and development of observatory instruments the table called the "tested table" was prepared; the "Ilkhanian" table and the "Ulugh-beg" table were the outcome. The calendar was produced, the altitude of the sun and the length of the solar year were naturally determined. Calculations or observations relating to the first appearance of the moon, to the inclination of the ecliptic, to the length of the tropic and sidereal year, to lunar anomolies, to eclipse, to paral-

*Al-Razi means the man of Ray, a small town near the modern Tehran. He was a Persian, born in 866 A.D., and died on October 26, 925. He was a skillful player of the lute, studied philosophy, Chemistry and became famous as a physician. He served as the chief physician at the hospital at Ray and was afterwards made director of the largest hospital at Baghdad.

[12] *Ibid.*, 19.

laxes, in a more complicated and more accurate form were presented. The first notion of trigonometrical ratios as it is used today was popularized. The third lunar inequality which is called today "variation" was discovered. Many other discoveries in this field and in other fields were made only because of scientific methods and the great devotion given to the perfecting of instruments.

In higher education, observation, experimentation, inductive as well as deductive reasoning, practice, laboratory work and analysis, as well as synthesis, were employed.

ELEMENTARY EDUCATIONAL METHODS

According to the Islamic doctrine, every child is innocent until he is able to discern. The parents have the responsibility of educating their children, that is, guiding them to behave intelligently.

Respecting the child as an innocent creature involves guidance, providing a protective environment and giving the child an opportunity to develop according to the teachings of the Koran.

Belief, according to Islam, is not only a conviction of the truth of a given proposition, it is essentially the acceptance of a proposition as a basis for action. This principle of Islam makes the reading of the Koran one of the daily duties of each Moslem and invites him to act according to the teaching of the Koran. The reason for putting daily reading of the Koran as a constitutent of Moslem faith is self-evident.

These duties of Moslems involve a compulsory teaching of the holy book in early childhood. Reading the Koran and understanding it correctly, in order to practice it daily, involve also grammar and elementary rhetoric.

In early Islamic times, the methods of teaching these elementary elements of Islam were individual teaching and the monitorial method, which probably were borrowed from India. The teacher taught the pupils individually. The elders and the outstanding pupils were selected as monitors and guided the learning of the others.

The Koran is arranged logically, that is, from the easy to the difficult, and from the simple to the complex. As the elementary schools were concerned with daily life and the curriculum was derived from the fundamentals of Islamic society, the pupils in a practical way acquired mastery of basic religious learning, especially in reading and writing.

Some of the great thinkers of Islam were interested in the education of children. They usually dealt with the importance of methods of teaching. An example of this was Ibin-Sina.* He adapted the traditional psychological doctrines

*Ibin-Sina (980–1037) was born in Afshaneh near the modern city of Bukhara, in the northeast of Iran. He studied basic religious education in early childhood, learned mathematics and became a student of law. At the age of 16 he had progressed so far in medicine that adult physicians learned from him. He studied philsophy also, and in addition wrote nearly a hundred treatises in different fields. In the East and West he was honored as an authority, particularly in medicine. He died in Hamedan in the west of Iran, and in 1952 his millennum was held there.

of Aristotle and on that basis developed a psychological and ethical principle of love which was all his own.

On this psychological basis, he pointed out that each type of soul has a specific form of love and specific type of objects with which it desires to be unified. On this basis, Ibin-Sina, in his treatise on *economy*, explained the methods which should be used by parents in educating their children. He insisted on choosing a good name for the child, selecting a learned and virtuous teacher, providing a protected environment and teaching the child a vocation fitted to the child's interest and abilities, and which was satisfactory to him. In his *Canon*, Ibin-Sina emphasized that no one should tamper with the child's interests until the age of six. The reason for this was to protect the child from complex emotions such as fear and anger. He believed that the child up to the age of six should be free to find the specific type of objects and learning in which he is interested.

Ibin-Sina believed that from the age of six to fourteen, the child should be put in a school but not all of his time should be used in academic studies. He also believed that along with eating, the child should have play and exercise in order to improve his physical fitness. Among the games and exercises suggested by Ibin-Sina were: walking, running, hiking, wrestling, jumping, casting, horseback riding, roping, and playing ball.

Consequently, it ought to be noted that Ibin-Sina used his methods of educating the child to emphasize the child's freedom of activity, interest (particularly in choosing a vocation), the child's ability, and natural growth.

Gihazzalior Algazel,* (1058–1112) wrote *The Revivification of the Science of Religion* in Arabic and Persian in 1106. In this book he summarizes his theories, which were based on the method of dialectics. After discussing the behavior of students toward teachers, the behavior of the son toward his parents and vice-versa, Algazel points out the most of the time the child learns through observing his teacher's behavior and takes him as an example. The child also considers his teacher as the best, listens to him talk and acts as the teacher acts.

In the Persian edition, which is a summary of the book, Algazel has emphasized the natural potentialities of the child, his teachability, and the importance of his attitudes.

He believed that in teaching, private-advisory talk should be used instead of harsh discipline; protective environment should be provided for establishing good habits; and motivation was stressed as the main basis for teaching methods.

Algazel also emphasized the importance of the senses in learning. He suggested that one should observe beautiful scenery for developing the sense of sight, smell good odors for the sense of smell and listen to good music to develop one's hearing.

*Algazel was born in Gazel, a village near Tus in northeast Iran. He studied the basic religious doctrines, became interested in mathematics, natural sciences, logic and philosophy. At the age of 30 he became famous when he was appointed to teach in the University of Nezamiyah at Baghdad. He traveled to Egypt also. As an author his books number nearly a hundred and include such topics as theology, philosophy, religion and ethics. He died December 11, 1112.

Although Nasir Al-Din Tusi (1199–1274) became famous as an astronomer and geometer, his educational ideas are also important. He is known as the Montaigne of the East and was aware of the significance of psychology and the importance of the laws of nature.

In his treatise, *Ethics*, he has summed up a psychological basis for teaching the child. For instance, he says:

> And the best would be a consideration of the child's nature, so that his potentialities and his abilities would become known, as a result to find out what does interest him and the child would be guided to learn what interests him. For everyone has not the interest and ability for all kinds of learning. If this were so all people would turn to the best professions. In these differences which exist in the nature of people rests a secret and a wonderful thought which benefited the order of the universe and the resistance of mankind.[14]

Later, he said that if the right subjects were taught to the right pupil the child would gradually develop to the best of his potentialities and achieve the right outcome. Otherwise it would be a waste of time. On the importance of the child's interests, he suggested that if the child has no interest in studying certain subjects, or if his organism does not adapt to that subject, he should transfer to another field of study. In connection with character building, Tusi's ideas are reminiscent of those of the humanists of the West, for he says: "Follow nature; whatever power is stronger in the nature of the child should be stressed and completed."[15]

Consequently it should be noted that Tusi based his teaching on the principle of interest, and he recognized the individual abilities and drives among both girls and boys. He also was aware of the importance of the laws of nature as related to the nature of the child, as a basis for teaching methods.

Sa-di* (1212–1293) by means of a number of pleasant stories, in his essay, *Effect of Education*, (a part of *Galestan*) has taken the natural ability and capacity as the basis of learning. In the Fourth Story of Chapter I, Sa-di says:

> Waste not thy labor in scattering seed upon a briny soil, for it can never be made to yield spikenard. Rain, on the purity of whose nature there is no disagreement, cherishes the tulip in the garden and the common weed in the salt marsh.
>
> How can any person manufacture a tempered sabre from base iron; nor can a bad-natured man, a wise-acre, be made a gentleman by education?[16]

In the first story of the essay on the *Effect of Education* he is still more emphatic in his views:

> Where the innate capacity is good, education may make an impression upon it; but no furbisher knows how to give polish to bad-tempered iron.[17]

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[14]Tusi, Khajeh, Nasir Aldin, *Akhlangeh Naseri*, Tehran, Ministry of Education, Tehran, 1936, p. 105.

[15]*Ibid.*, p. 106.

*Sa-di, the poet and moralist of the thirteenth century, was born in Shiraz in the year 1212. He traveled much and studied at Baghdad. His *Galestan* or *The Garden of the Roses* is known by all Persians who can read, and is also known in the Western world.

[16]Sa-di, Shirazi, *Galestan* (Tehran, Amir Kabir Co., 1930) p. 26.

[17]*Ibid.*, p. 178.

Along with the importance of heredity, Sa-di has stressed the importance of selecting the right companions, and the importance of practice as well as apprenticeship.

CONTRIBUTIONS TO THE BROAD PROBLEMS OF EDUCATIONAL METHODS

The broad problem of methods of education in Islamic culture was an outcome of the philosophical interpretation of human nature and the aims of their education. The general aim of education was intelligent and virtuous behavior derived from the teaching of the holy book. Reaching the point where one behaves intelligently involved going through a personality evaluation. Islamic doctrine has taken the child in a natural condition, but his nature is subject to evil and transgression at the several stages of his growth. As long as he is devoid of high moral qualities, he might be subjected to the lowest stage. This stage is thought to be present as long as the individual does not walk in the light of true wisdom and knowledge but acts in obedience to natural inclinations of eating, drinking and sleeping, which lead him to become enraged or excited. This stage which is governed by passions should be guided by wisdom and knowledge. Knowledge and wisdom will be able to hold the reins of man's natural desires.

The result of knowledge in the service of controlling passions is considered a moral transformation in one's soul from transgression to virtue. This stage is called the self-accusing spirit (conscience). As stated in the Koran:

> And nay! I call to witness the self-accusing spirit (on every dereliction of duty or on the slightest act of disobedience, being conscious of having offended).[18]

The tendency of the self-accusing spirit is to generate noble qualities and a virtuous disposition. It tends also to transform life so as to bring the whole course and conduct of it to moderation. However it is not enough to practice virtue exclusively. Therefore, for the attainment of intelligent behavior one has to achieve moral excellence and go through the third stage in which one is sure and aware of his whole action. The condition of the soul at this stage has been called "soul at rest."

> O soul that art at rest (and restest fully contented with thy Lord), return to thy Lord, well pleased (with Him) well pleasing (Him); so enter among my servants and enter into my garden.[19]

At this stage the individual has found rest in his Lord. It is in this life and not after death that this great transformation is worked and has led the individual to intelligent behavior. Its result is also in this world and not elsewhere; access to paradise is granted and he receives the advantage.

The physical conditions of man are closely connected with his moral and spiritual states; so much so, that even his modes of eating and drinking play a part in the molding of his moral and spiritual qualities. Therefore, the teaching of the Koran, which considers the modification of behavior, applies itself a-

[18] *Koran*, lxxv, 2.
[19] *Koran*, lxxxix, 27–30.

bundantly to the reformation of the physical state of man's life. The soul is not something to be considered separate from the body. Mirza-Ghulam Ahmad explains:

> The soul is a light which springs up from the body which is being prepared in the womb. By the springing up of the soul I only mean that at first it is hidden an imperceptible, although its germs are present in the seed, itself, and that as the body is gradually developed, the soul grows along with it and becomes manifest. There is not the least doubt that the inexplicable connection of the soul with the seed is in accordance with the design of God and with his permission and will. It is a bright essence in the seed itself. It is not a part of it in the sense in which matter is a part of matter, but at the same time it is untrue to say that it comes from the outside, or as some wrongly imagine, falling upon earth is mixed with the substance of the seed. It is hidden in the seed as fire is latent in the flint.[20]

The methods of acheiving this stage of personality, that is, behaving intelligently, also are suggested by the holy book. The Koran advises the adults to take its general direction as rules of guidance for all stages of life and suggests that parents should be examples to their offspring.

The best method of cultivating noble qualities such as chastity, honesty, meekness, politeness, forgiveness, goodness, courage, veracity, patience, and sympathy, which would enable an individual of the age of discretion to abstain from inflicting injury on his fellow-men and to reach self-direction, is prayer. By requiring that prayer be observed at a certain time, Islam makes praying an institution. Prayer is taken as a means of moral evaluation. Partaking of it, five times a day, therefore, refreshes the soul daily, as food does the body. It purifies the heart, which is the only way of communication between God and men. It guides a Moslem to safeguard himself against evil and to act according to the accepted principle.

According to Islam, right belief is nothing if not carried into practice. The nourishment of the good sense of the right belief would be good deeds.

Following this principle, one can see that Islam advocates the method of practice for the development of one's personality and for the maintaining of moral evolution, and as a result, behaving intelligently.

Koranic rules should also be taken as a method supplementing the above mentioned ones. The rules which direct the intentions and actions of men are such that he may not injure the life, property or honor of his fellow beings by means of his tongue, or hand or eye or any other part of his body. In short, self-control is to be obtained through the good conduct of parents, providing opportunity for growing and directing the senses, maintaining the right habits, practicing, daily prayer, and doing good. These methods are based on the five main Islamic principles. They are; (1) a belief in God, the great unseen; (2) a belief in divine revelation, and (3) a belief in the life to come; and on the practical side (4) praying to God, and (5) charity in its broadest sense, indicating the performance of one's duty to an unseen God, and the performance of one's duty to his fellow men.

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[20]Mirza-Ghulam, Ahmad, *Teaching of Islam* (Lahor Printing Press: 1910), p. 13.

EXISTENCE, CAUSATION, AND INTELLIGENCE*

BY ERNEST E. BAYLES

THE QUESTION OF EXISTENCE AND CAUSATION IS A PERSISTENT ONE in philosophy. What an object or an event *appears* to be is easily told. But what it "really is" is a question with which mankind has persistently struggled but for which no satisfactory answer has yet evolved. Yet the question is considered philosophically important; so important, in fact, that philosophy is often defined as a search for "ultimate reality." And, since pragmatic or instrumentalist philosophy is so frequently accused of begging this question and, in consequence, of not being a philosophy at all, it would seem not amiss to write down a few thoughts which involve a distinctly pragmatic or relativistic outlook. The question is one of ontology—the nature of existence or being.

Idealism carries the assumption that ultimate reality is of the nature of mind or idea. Thinking an object, whether by God or by man, is what brings it into existence or causes it to be. Hence, "mind is the explainer." The thought or idea of an object or event is reality; its tangible, sensible, or material form is merely a finite expression of that which is taken as fundamental (or infinite)—the idea or the thought.

Realism carries the assumption that ultimate reality is of the nature of essence or law. One can think of the universe as composed of some fundamental essence or essences—electrons, protons, and neutrons were so considered only a short time ago—and these essences, behaving in accordance with fundamental or universal law or laws, cause objects and events to come into existence. Thus, the laws of nature cause electrons, protons, and neutrons to undergo certain combinations and thereby form atoms, atoms to form molecules, molecules to form substances, substances to form objects, and objects by their actions or activities to form events.

Therefore, it is evident that both idealism and realism posit a fundamental (or natural?) "order," which is the ultimate ontological existent and whose nature it behooves man to divine. This natural or fundamental order is not subject to time, place, or circumstance but, instead, accounts for them. Hence, such order is absolute—absolved; dependent upon itself alone. Within the two foregoing philosophies, only a thoroughgoing solipsism avoids the assumption of a fundamental, objective order which exists prior to and independent of any finite knower, potential or actual.

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RELATIVISM AND REALITY

The major purpose of this paper is to consider the position of relativism or pragmatism on the matter of independent order or existence. What is it that exists or has being? And what "causes" it to exist?

When a potential knower, such as a normal human being, views an event and the objects which have participated in it, he receives a distinct impression that such objects and event are distinctly real. They do not appear ephemeral. They seem to be really there and to have really happened. Take, for example, an automobile accident. Even though the persons involved may not have intended it, they seem genuinely affected by it. They are bruised and hurt, a repair bill impends, and spectators shudder to think how they themselves might have been affected. All have been, or might have been, pushed or pulled about whether they wanted it or not. The phenomenon makes a real difference both to participants and to spectators. It seems to be real.

Reality, therefore, seems to be definable as something which might, should, or does make a difference to someone or something. The difference may be anticipated or known, or it may not. Thus, *knowing* and *being* are distinctly different from one another, and one who views reality in this manner cannot reasonably be dubbed a solipsist. Moreover, such a definition of reality implies that an idea or a thought may be as real as a stone wall. Thoughts or ideas make tremendous differences to most of us whether they are our thoughts or the thoughts of others; it may well be that they make more difference to human beings than does anything else.

But, as to being or existence, what is its ultimate nature? And what is the ultimate "cause" of all things? In other words, what constitutes ultimate reality? It is when the question of *ultimate* reality arises that pragmatists or relativists, in effect, walk out on the discussion; and they do so because to them such discussions appear utterly futile.

It seems that this perhaps is the crucial point at which logical positivism balks at being thoroughly relativistic. In a recent symposium on operationism, Dr. Bergmann has the following to say:

> "All this [the procedure of operational measurement of a ledge taken to be three feet long] is completely noncontroversial. Equally noncontroversial is, to my mind, the proper answer to an objector who voices, as it were, certain apprehensions of common-sense realism. 'What you say,' so the objection goes, 'sounds suspiciously as if you thought you were somehow making the ledge's length when you measured it. Yet, the ledge has a length that is there and, in particular, the length of three feet whether or not you or anybody else measures it.' Here is what I would answer. 'The query for what there is, the so-called ontological question, belongs to first philosophy. It cannot even be discussed intelligently in this narrow context, and the logic of scientific concept formation, with or without the operationist footnote, has no bearing on it whatsoever. If it will help to convince you that this is so, I am prepared, as long as we talk in this very general fashion, to put the conditional in the subjunctive, 'If one *were* to do this and this, then one *would* observe that and that.' On the other hand, if you want to *know* how long the ledge is and have no means of inferring it from something else that you already know, then you will indeed have to measure it. This is per-

fectly commonsensical. So you need not fear that by admitting it you have fallen into a philosophic trap." (All italics in original.)[1]

Dr. Bergmann immediately dismisses operationism by adding, "Fundamentally, this is all that needs to be said about operationism as such." It would appear that, when he says "if you want to *know* how long the ledge is . . . you will indeed have to measure it," he is simply saying that, if you want *really* to know something, you must indeed *observe* it rather than operate upon it. In other words, you must disclose ultimate reality.

When an object or an event presents a convincing appearance of being real, a relativist for the moment at least takes it to be real and deals with it as such. It is so taken because it actually does, or can conceivably, make a difference to one. It has to be taken into account in whatever plans one might evolve relevant thereto. It cannot be disregarded without likelihood of one's plans going awry.

But, whether it represents ultimate reality is a matter on which one can make no plans at all. Conceivably, it would be advantageous to know. But how can we know? Moreover, how can we know whether a given conception of what ultimate reality might be is even in the right direction? The idea, that piecemeal discovery will assuredly at last disclose what is at least vaguely indicated all along the way, is one which is thoroughly at odds with human experience. Take, for example, the typewriter key "l." Is it to be taken as the letter or as the numeral? How can we know unless we know a larger configuration in which it is to appear? Moreover, how can we know beforehand whether a handwritten vertical line is numeral one, the nose of a face, or the left-hand side of a rectangular figure?

It can perhaps be considered common knowledge today that, for a potential knower, perception of a given object or event is as much dependent upon the configuration in which it is to be observed as on its own qualities. And a million million observations of its qualities in a given configuration will be of little, if any, help in predicting what qualities it will have in a new configuration. To try to predict with accuracy what we would know if we knew what we do not know now—before the over-all configuration is known—represents futility. A relativist feels that he has far too much on his hands with the continuing task of doing his part in ordering the affairs of mankind to expend time and energy chasing the pot of gold at the end of the rainbow. And who can know but that the gold is really there? Events as outlandish have come to pass. We can now make gold out of lead, you know.

Returning to the question of whether there is a cause-and-effect "order" in the universe independent of human intervention, a relativist readily and frankly admits that he does not know and that he sees no way ever of knowing. But, and this is a point seldom made explicit, *he assumes that there is*. The very fact that a thoughtful man, whether he be philosopher or scientist, attempts to *read order into* the affairs of the world is, in itself, evidence that he is assuming the universe to be orderly. Else, he would be embarked on an almost hopeless quest.

For example, a relativist—be he philosopher or scientist—assumes a gravita-

[1]Gustav Bergmann, "Sense and Nonsense in Operationism," *The Scientific Monthly*, Vol. 79, No. 4; October, 1954; p. 211.

tional order of greater or lesser universality and designs the affairs of his life in accordance therewith. But the strictly relativistic position is always, without exception, that any order *which he takes to act upon* is an order *which he reads into* the universe; not one that is "really there." He neither asserts nor denies that it is really there. He assumes that it is, but this assumption is based on his experiences and will be changed as soon as, but not until, his experiences warrant. It has none whatsoever of the characteristics of a philosophic absolute. For him it has reality. He orders the affairs of his life by it. To him it makes a real difference. But for him it is not ultimate reality. It has all the ephemerality of his own brain processes which produced it.

RELATIVISM AS A SOLVENT OF THE DETERMINIST DILEMMA

The Baconian-Newtonian science of the several centuries prior to the twentieth has been insistent on assignment of natural cause-and-effect relationships to processes and events. A "natural law" was presumed to be an ontological existent; a given cause directly and dependably responsible for a given effect. The epistemological function of science was, in consequence, that of discovering such independently existing cause-and-effect relationships. Logically, therefore, nature is determinate. If one had complete knowledge of all natural laws, one could predict with certainty the course of a given line of events and, by logical projection, could plot the complete course of universal history. Thus, natural law is the fundamental, ontological existent; it causes electrons, protons, and neutrons to cause, in turn, atoms, molecules, substances, objects, and events. Natural law represents, in consequence, ultimate reality. This is philosophical and scientific realism. Nature is determinate, and natural law or order is the ultimate determinant.

The relativistic upheaval of the twentieth century, both in science and in philosophy, raised again the possibility of indeterminacy. In fact, that is at least one aspect of the Heisenberg Principle—that one cannot have both complete clearness and complete coverage at one and the same time. The point is well illustrated by one's experience with a compound microscope; the more clearly one is able to focus upon a given stratum of an object under magnification, the more thoroughly the rest is out of focus. On the other hand, when one is able (perhaps with naked eyes) to see an object as a whole, one is by that very circumstance unable to see the minutiae which a powerful microscope can reveal. In other words, one cannot have everything at once.

The relativistic assumption, that the "order" which a given individual reads into the universe is his own concoction, avoids the dilemma of determinism. Whether nature is ultimately determinate or indeterminate is no longer a problem. It may be either way. In any case as far as man's designs or plans are concerned it is *man's interpretation of* what is "out there" which counts, and these interpretations are in no sense absolutely deterministic. They serve man's purposes of prediction, and via them he orders his life. He assumes his "laws" to be accurate until experience demonstrates them otherwise. They are what he has to work with, and all he has. But are these "laws" ultimately true? There is no assumption that they are. On the basis of man-made laws, man determines his plans for action. Subsequently, such laws and plans are subject to review and revision if and whenever experience so indicates.

Briefly then, the relativistic position is that a universal, ontological "order," independent of human influence except as human beings function as part of it, is neither asserted nor denied. But, it is assumed. The solipsistic position is consciously rejected. Moreover, it is not covertly though implicitly functioning. Both objects and events are taken as existing, and being caused by influences, independent of human thinking except as human thinking is a direct participant. In a loose sense, it may be justifiable to say that people "discover" natural order but, when speaking with care and precision, a relativist will use the word *invention* rather than discovery. Whether Cosmic Mind, or God, is responsible for universal order, either by thinking it or by creating it in some other way, is a matter on which relativists are convinced that no finite mind does or can have knowledge and is one on which no commitment, either for or against, is required by the logic of the relativistic position.*

Contrary to recurrent claims, relativist ontology is not one of creation by a potential or actual knower. An object or event is neither true nor false; nor, inherently, either good or bad. It simply *is*. Epistemology is one thing, axiology another, and ontology still something else. It is quite reasonable, however, to speak of ontological existents in contrast with existents which are epistemological or axiological. A truth can exist, as can also a value or a norm. And herein comes to light an interesting difference. For, although objects and events are taken as not humanly contrived (with the exception previously noted), the relativistic position is that both epistemological and axiological existents are human contrivances. Here is where human creativity enters. Man makes his own truths and his own values. A relativist assumes that the "laws" of the world—both epistemological and axiological—are man-made.

Considering reality as that which makes a difference to one—as that which may not be pushed nor pulled about willy nilly, which has resistivity of its own and which on most occasions will itself do some pushing and pulling—it follows that reality can be either ontological, epistemological, or axiological. For entities in all three categories do make a difference to human strivings. But, as far as intelligent action is concerned, the reality which is crucial is of the man-made varieties—epistemological and axiological; insights and values.

When a person designs a given behavior-pattern preparatory to execution, he does so in light of his goal or goals and of the situation which confronts him. Goals, of course, are axiological; what one wants or considers worth seeking; hence, self-made. On the other hand, the confronting situation wherein goals are to be achieved is not self-made; that is, it is an ontological existent and must be dealt with on its own terms regardless of the wishes of the person. However, the behavioral *design* which a person formulates or invents is *not* on the basis of the confronting situation *as it is*. It is, rather, on the basis of the confronting

*Seemingly, the difference between the realistic and the relativistic position is not on the *assumption* of an ontological, natural order, but is basically on the criterion for determining truth-quality and perhaps the nature of truth itself—therefore on epistemology. When one takes truth to be a "quality of a report on reality"—the quality of correspondence to reality—one makes truth-getting a process of discovery; of trying to find what is really, ultimately there. Thus the truth-test becomes one of correspondence to something which, by definition, can never be known short of infinity; too late for mortal man. In consequence, realism commits man to a quest which he always has to admit, when pressed, is a hopeless one.

situation *as he sees it to be*. Experiment, as well as experience, have by now certainly demonstrated this point beyond reasonable doubt. If you or I see a door as locked, our next steps with reference to that door will be as if it were locked regardless of whether it actually is locked or not, and will so continue until experience convinces us to the contrary. Hence the "reality" which serves as basis for behavioral design is axiological (goal) and epistemological (insight); both self-made; creations of the designer.

An objector immediately exclaims, "Ah, yes, just what I have been insisting. Solipsism!" But I reply that this is not solipsism at all. A relativist who remains true to his premises never takes an insight to be final or absolute. All are tentative or hypothetical, subject to change the moment the resistivity of ontological reality registers its mark upon his insights or sensitivities. This is Dewey's principal of perceptual "interaction," perhaps the one crucial point at which Dewey's philosophy differs from those which preceded it. I take the ontologically existing world for what it *appears* to be, and *on that appearance* design my behavior. I hope that my insights are accurate, that such appearances "correspond" to ontological reality.

But the *test of truthfulness* of my insights is not one of correspondence (as it is with realism and with idealism). The test is that of *anticipatory accuracy*; does the behavior-pattern which my insights lead me to design actually turn out, upon trial, as anticipated? To say that an insight is true *if it works* is not a sufficiently precise rendition of the relativistic-scientific test of truth. It includes too much and makes valid the rejoinder that a lie will then be a truth, if it works. There is only one way in which an insight has to "work" to imbue it with truth-quality; it must work to achieve anticipatory accuracy. In the degree to which an insight accomplishes this end, it is truthful.

INTELLIGENCE, WISDOM, AND IMPLICATIONS FOR EDUCATION

And now we are ready to attempt a definition of the term intelligence, and to do so in light of a seemingly necessary contrast with the term wisdom. For I have found that much of the confusion which intelligence-test makers have long sought unsuccessfully to avoid is clarified if this contrast is made clear.

We would define intelligence as *the capacity to form insights* whether they are to be tested or not, and wisdom as possession of, and ability to use, tested or dependable insights. Considering insight as a sense of pattern or design—whether clear or vague, true or false, comprehensive or limited—we can easily conceive of achieving an insight without going to the further trouble of testing or proving it and thereby determining its dependability. In so doing we are exercising intelligence, but hardly gaining wisdom. I have found that much of educational literature would be greatly clarified if we would cease calling behavior intelligent when indeed we mean that it is wise. Taken in the sense here proposed, to say that behavior is intelligent is merely to say that it is designed; that it is planned or envisioned to achieve a given end, whether the plan is good or not. And the further-flung and more harmonious the plan, in terms of time as well as space and of past as well as future, the more intelligent it is. And intelligence tests should be designed to evince this capacity. (*Continued on page 79*)

THE TWENTIETH CENTURY SOUL

BY M. L. STORY

THE DESTRUCTION OF THE "SOUL-SUBSTANCE" THEORY and the refutation of the traditionally assumed dualism of soul (or mind) and body has been one of the chief preoccupations of modern educational philosophy. The simple premise upon which an "organismic" approach to education is based is this seemingly irrefutable banishment of the soul concept. The conclusion is that an awareness of that naive, older mysticism, which demanded a wraithlike referent for such a metaphysical idea, is the sufficient proof that the idea is outworn and useless. Leading psychologists of today are, however, admitting something like a soul, and while there is certainly no reaffirmation of the soul-substance theory, a renewed emphasis upon intuitions of faith and intuitions of love is evident in both science and literature. Whatever the argumentative advantage of confining its meaning to a convenient historical narrowness, the inconvenient fact remains that the "soul of man" is still commonly and widely cherished among us.

In spite of a traditional insistence upon some relationship between the soul concept and a higher, ruling divinity, the intuitions of man have never failed to give unconscious recognition to human intelligence as a kind of awesome potential. Such intuitions or "intimations of immortality" are invariably strongest in that "feeling-creative" type of individual whose intelligence is less controlled than spontaneously productive of the masterpieces of art and invention. Those mystic layers of creative intelligence which respond not to scientific discipline, but which are more closely related to some inner "talent" or capacity, have always provided the unexplained phenomena which instigate awe and worship. It is highly significant that scientific explanations of the creative act so often acknowledge the ultimate dependance upon such a chance factor of insight as the serendipity principle or else describe creativity phenomenally as a final result of the slow process of mental assimilation. In short, our best clue to the nature of higher thought processes is not a formula of science but a rule of action. In the last analysis we simply put the mind to work, and its powers are still mystically unpredictable.

Nothing is thus more superficial and infinitely pretentious than that cynicism which persuades us that a void of emptiness is the modern alternative to christian "mythology." The aspiring constructs of the human imagination have been historically characterized by a primitivism which, instead of being the current last hope, must be seen literally as the obsolescent fantasies of an undiscerning childhood. The very propensities of mind which not only created such elaborate systems of worship, both christian and pagan, but remain innately responsive to them are inevitably challenged to deify new ideals and aspirations. The worship of man's highest potential and the recognition of our common hopes of perfectability can no longer remain dependent simply upon folklore and upon the childish

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acceptance of the mysteries and miracles of an ancient era. Needless to say, religion is not synonymous with either orthodoxy or Fundamentalism. It must necessarily be our most dynamic area of advancement rather than one which by the false and shallow pretension of stability which it now seeks to provide leads us ultimately and inexorably to pessimism and despair.

We must advance so far beyond the repeated inanities of that centuries-old debate about the validity of historical Christianity that we escape also the inevitable seers of Transcendentalism, Humanism and Rationalism. We have unconsciously foreseen the same pitfalls in these substitute theologies and rejected them. Deeply impressed by Emerson's distaste for the Christian "exaggeration of the personal, the positive, the ritual" we have nevertheless been completely unimpressed by his substitute oversoul. Persuaded by Thomas Paine's fervor we have risked an impairment of faith in the contemplation of his assertion "the groveling tales and doctrines of the Bible and Testament are fit only to excite contempt." However, we have not responded in any literal sense to his ideal Age of Reason.

Nothing has been so largely instrumental in impeding religion as an obvious intellectual distrust of the Hebraic legend. Yet only a few daring thinkers in each age openly and deliberately challenge its veracity, and when they do their substitute philosophies are more apt to enforce skepticism than to stimulate conversions to a new faith. We have rested the case for the "soul" entirely upon ancient confirmations, and we resist faith in modern substitutions at the price of utter nihilism and despair. If we hypothecate a world in which man's intelligence remained the same but in which the nostalgic recollection of a scripture-and-worship heritage were suddenly banished, we can hardly assume that man would be one whit less disposed to contemplate, on some newer plane, this same question of the nature of his "soul."

We are, in fact, contemplating it rather obsessively today with the greater advantage of an extended experience with both its fructifying and its devastating effects in the shaping of our history. We have closely witnessed, as have only a few generations before us, innumerable instances of the most graphic and brutishly imposed degeneration of the individual into a pitiful animal helplessness. We have seen little evidence either of some manifest Oversoul or of the Humanist nobility of men or of the sacredness of cold Rationalism in the mass degeneracies of totalitarianism. We have been persuaded, as never before, that man himself must deliberately create his individual soul in freedom and enlightenment, *i.e.*, that the very plausibility of the concept is dependent upon a life condition in which man assumes at least some measure of individual dignity.

The search for some simple final principle is just as futile as the assumption of a falsely sacred attitude toward already-confirmed "verities." Albert Schweitzer's emphasis upon the liberation of man from mass institutions and mass ideas runs the current risk of being simplified into a straw-grasping "will-to-life" Philosophy. The individualism of Schweitzer's heroic example and the nature of his humanitarian service are symbolic of the dual criteria of a plausible soul-emphasis in the modern world. Yet his cry for individualism and the "man-of-the-century" esteem which he has achieved are, in a sense, merely the repetition of our messiah-heroic pattern. It is not our continued privilege to propose a

critical anarchy from mass ideals and institutions. Man's evolutionary premium must be placed not on the creation of a few intelligent individuals but upon mass wisdom and a universal freedom from the inspired and charitable leadership of any single individual, be he infinitely benevolent or Christlike. Man literally possesses a soul only when the least among us shares with dignity in the uplift and leadership of us all.

The educability of man has been so thoroughly demonstrated that it has come to be feared rather than cherished. Every modern philosophy seems unconsciously to stress above everything a frantic "control" of educational direction. Without exception, our efforts are insanely directed toward control, control, control. Theoreticians frenziedly seek to pin down man's nature in utter and absolute terms. The following statement, which is representative of this modern passion for fixity, epitomizes clearly the past and present neurotic search for the levers of control:

> 1. There is an *essential Homo sapiens.* The essence is discoverable, it will have the power to command consent.
> 2. If we could discover this true nature of man we would promptly know what he *ought* to do in order to be himself . . . [1]

The simple and hopeful absurdity of this thematic statement of a whole age of misguided scholarship is quite evident. It is based not so much upon a hidden assumption as upon an outright *wish.* We are truly pursuing the vain quest for a "philosopher's stone" as never before.

There are, of course, obvious fallacies in such an approach. One might easily challenge the very educational motive which clearly underlies this continued search for pretentious clues to an imposed control over the educational destiny of the individual. If man has no other right he has the inescapable privilege of being *what he is orginally*, and no amount of philosophical or psychological defining is likely to affect this. Such definitions, however, are invariably directed toward what *he is to become*, and thus this nonsensical "scientific" approach is presently the most devious example of a rationalized meddling with human potentialities. Thankfully, the blindness of science is not imposed upon the common man, who could give, with intuitive ease, the same answer which science always arrives at under some such nebulous terminology as "dynamism" or "plasticity".

The most highly questionable aspect of this approach lies in the accompanying sociological chains which we inevitably carry behind our backs as we search for the "essential nature" of man. These chains are, of course, to be used to bind most effectively the emerging generation, and our pretentious interest in the "true nature" of man becomes admittedly a sort of wily scheme to abet this enslavement. We philosophize grandiosely about the "nature of the child" on the one hand and the "nature of society" on the other. Assuring ourselves that the values of our society are the gist and matter of education we actually never challenge the rightness of *forcing* these upon innocent children. Education is thus always inadvertently contrived as the most cruel of instruments, placing children utterly at the mercy of an older generation which is righteously intent upon binding them irrevocably to the existing social pattern.

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[1] Laurence E. Cole, *Human Behavior* (Yonkers on Hudson: World Book Co., 1953), p. 822.

Educability is then, in the fullest sense, *vulnerability*. While we sing the praises of the educational *potentialities* of man we are invariably more impressed by the *weaknesses* which human malleability so easily demonstrates. In truth, most educational philosophy is an outright search for such weaknesses. We boast of nothing in louder terms than of our diabolical skill in "shaping" a child. Church educators are especially vociferous in this respect, asserting openly that "if you give us a child until he is twelve years of age, he will always be ours." What a narrow escape for all of us who are not theirs! And thus the point in question: Have we this right to "shape" the defenseless and innocent child?

The education of human intelligence is, of course, the very antithesis of this doctrinal "shaping". Education must exist in fact, as the sole institution which can afford us *protection* against such an arbitrary moulding of humanity. *Schools must become the outright guarantee of freedom which we sign for the unborn.* The freedom in question is not a ideological concept but has, of course, the purer connotation of utter release from fixed and preconceived formulations of life. This has been the deeply submerged American dream. It must find actual and ultimate expression if we are to avoid the partisan chaos which augurs self-destruction.

II

A concept of the soul of modern man is centrally involved in the educational question. Through a combination of thought and myth we have formulated this spiritual abstraction along the most primeval lines. Yet thought alone, unvitiated by myth and mysticism, points unmistakably to an inner potential in which the "symphony of feeling" and the capacity for a whole range of nonenvironmental experience utterly defy the logic of materialism. To deny mythology empirically is not to deny man's spiritual nature but rather to deny both its traditional definition and its original animistic representation. With the waning of superstition and mysticism education has turned almost wholeheartedly away from nonscientific or "spiritual" pursuits, classifying them emptily as "esthetic" and tolerating them only as avocational areas, yet this extended reaction against the affective or feeling aspects of life has been followed by a modern reversion to the soul concept without any plausible accompanying rationale except the self-same ancient religions.

There is, of course, the hidden assumption always that a sort of "homunculus within the brain" makes spiritual brothers of us all. This intuition is strengthened by scientific verifications relating to species. However, in spite of our penchant for identifying ourselves with the human "mainland," it is clearly evident that such poetic assertion as the famous "no man is an island" are mere dreams and aspirations rather than descriptions. To ponder an extreme kind of illustration, one might visualize a juxtaposition or line-up of human figures which would include such variant examples as the "wolf children" of Siberia, the Japanese Kamikaze, a bushman headhunter from Australia and a whole range of similarly incongruous examples. Our supposition that there is a commonalty among men which simply requires some ultimate "communication" is not only patently absurd but is perhaps the most naive perpetuation of an idiot-savant mythology that could be

conceived. While we listen fervently to poets who exalt the likeness of men to God, we are literally surrounded by conclusive anthropological data which demonstrates, above all, the extraordinary dissimilarities among men created by culture and custom. Brushing away the obstructive debris of poetic superstition we can see among men at the least the prosaic and common element of *educability*. Each divergent and fanatically opposite human type is formed so inexorably by his training that the futility of centuries haunts our recognition of this simple and obvious fact. The basic common factor is that "potential for similarity" inherent in the species and achievable through education.

III

Yet it is undoubtedly the soul of man which knits and formulates the fragments of his experience into a wilful pattern of self-abnegating *purpose*. Growing out of his slow accretion of consciousness is the mysterious will to act at some supreme moment with self-sacrificial finality. The apex of his individuality lies in this potential for a final devotion to some construct of his intelligence or understanding. Despite all our historical efforts to attribute human motives to blind or divine automatism the fact remains that man will always have *one final free prerogative. He can give himself.* Thus the freedom of man stems from his one undeniable possession *i.e., the ultimate force and effect of his own life.* That his education must guarantee the fullest opportunity for *his own* choice in its disposition is the inchoate American dream which has inspired universal education. Education is, in effect, this increment of independent choice.

It is the potential for making history which clearly places this selfhood above a world of automatism. Whether one, in obeisance to modern scientific terminology, calls the "self" a new dimension, existing perhaps both inside and outside of time and space, or whether one simply recognizes it as the "lone realm of freedom" in a material universe, there is certainly nothing obscure about its unique potential. We have sought always to aggregate all phenomena within a closed system, but the soul of man wanders untrammeled, carrying always as its mark of distinction a most obvious freedom from the simple structures of the natural world. Whatever its broader manifestations, the single facet of educability in man clearly stands above a determinate history or a scientifically predictive world-destiny. The weird imposition of a sort of "automatic control" upon reason is simply the result of a secular cultism which is far more narrow and suspiciously orthodox than any preceding worship-formulation of the race.

The philosophic precedent which so ensnares our thinking is the age-old effort to make mind or reason synonymous with the "divine spark". From Plato and Aristotle down through a well-known line of impressive successors the idea of "form and structure," which was the central objective mystery of the universe, could be paired naturally with the rational ability of man which was, in turn, the prime subjective mystery. The naive simplicity of such a solution has continued to delude us largely because we are just as intent as they were upon forcibly dispelling *mystery* or at least in agreeing importunately upon its ultimate solution. The element of primitive *awe* has been our fundamental blindspot. We have never dared fully to utilize the effects of man's potential, as a scientist uses the effects of electricity, without undue concern about its rational explanation.

We await blindly the messiah-formula when the *very exercise of our intelligence is dependent upon mystery.* One cannot actually predicate reason or intelligence in a closed system. Certainly in such a system education would become far less dynamic than knitting or checker playing. And the crucial point is that we have literally conceived it in just this fashion, as a fixed set of patterns and rules which we are prone to set deliberately and autocratically while we wait impatiently for some Platonic perfection to impose upon the whole formula.

Secularism is, of course, a cult of fear. It is an overweening dread of the unknown which frantically and ruthlessly denies the ego of man. Ignoring its skeptical rationale we can easily witness its unbelievably stultifying effects in the resultant totalitarianism and materialism which are dually characteristic of our times. Secularism is an esthetic revulsion against the non-symmetry or incoherence of past ideals. It is a wilful and squeamish antagonism toward a disordered universe and yet it has openly invited that disorder in its hopeless rejection of past rules and directions.

In our naive search for some simple intellectual coherence in the universe we have not even acknowledged the leadership of intellectuals. We have continued to look to hero-potentiates, assumedly expecting them to be given a "sign," while education, when it was not a slave, tagged along as an obsequious camp follower of the human caravan. Education has never been given a position at the forefront mainly because such a reversal of the tribal pattern would condone and concede *the lack of a fixed intellectual coherence* in the man-world relationship. The assertion that secularism invariably enslaves education needs no urging in a modern world where the term *indoctrination* is the universal conception of schooling, if not in most instances the actual usage. An extraordinary fear of *thought* is the invariable earmark of the retrenching secular attitude, because it must rest its case so precariously upon a wishfully simple formula of scientific determinism.

Thus we await in each era the coming of some ignorant, diseased, or half-sentient mystic who will provide a weird, secular-divine illumination, and we have already intuitively specified the actual nature of that magical presentment as some grandiose "Newton's Law" which keys the mysterious lock of life. The so-called "faith in intelligence" evidenced by secularism is a faith in the finality and fixity of the trend of present knowledge. Recluselike, it acknowledges the approaching millenium of human understanding by closing the door and studying the contents of the room while awaiting the final, fateful knock of some ultimate messenger with a missing theorem.

Our concept of the human spirit suffers equally from the distortions of science and mythology. The one denies its reality while the other gives it an exaggerated personification. Both are, in effect, basing its validity upon some tangible materialization. This is an assumption of the necessity of a finite *referent* for a concept which in its intrinsic connotion deliberately seeks to describe the invisible and non-analogous aspects of man's existence. One can hardly expect to determine the soul's "actuality" either by perceptional methods or by some pragmatic verification of such hypotheses as derive from visions or intuitions. Its *real* existence would be an abject denial of its original antithetical meaning in a sort of transposition of the spiritual into the physical. It is this straining after opposites which characterizes the disputations of traditional theology with its inherent

mixture of the real and the assumed. The invariably resulting anthropomorphism has weakened or virtually destroyed a necessary construct which remains in our vocabulary because of its essential descriptiveness of our most important phenomena.

IV

Science has, in effect, strengthened our regard for form, and thus the modern return to religion is characteristically an emphasis upon the *formal* aspects of worship. This is not only true in the current revival of traditional theologies but especially among the new religions of Communism, Fascism and Nationalism. The obsessively systematic, *conforming* principle which is almost the essence of such doctrines is, at once, a substitute piety and a clear recognition of the fearsome potential for *nonconformity* within the human breast. The unmistakable evidence of man's soul is furnished by these and a hundred other historic doctrines designed to control or predispose it. The rigidity of every current social doctrine is an unconscious enforcement of a moulding, shaping, restraining fear of *intelligence* and the unpredictable *purpose* of the mind-side of man. Every current ideology appeals clearly to basic animal instincts of self-gratification and thus attempts openly and uncompromisingly to perpetuate selfishness as the deeper motivating rule of life.

Yet the obvious and well recognized shift of thought in the realm of honest religious inquiry has been a rejection of the naive appeal to the home-on-high greediness of the lusting individual. The soul of man has developed, paradoxically, as that traditionally selfish, paradise-seeking predilection for ultimate animal comfort. Yet an ever strengthening human consciousness, in the form of a direct awareness of this thinly veiled rationalization of gross animalism, has been the essential characteristic of intelligence. The fundamental shift which we are presently undergoing with such perplexity is toward the alternative of a devastating integrity which actually acknowledges and *faces* the patent selfishness of traditional idealism. Every world religion of historical importance has relied upon the simple dual aspects of *unselfish means* toward *selfish ends*. While modern intelligence has not rejected the logic and legitimacy of comfort-seeking *ends* it is plainly disillusioned about the other-worldliness of traditional beliefs. Thus we face today the ultimate test of those soul-elements in man which make him demonstrably capable not only of unselfish means but of *unselfish ends*. This is indeed the elusive potential which lies outside of physical nature and which, by its unpredictable dynamism, can be classified only as the spiritual side of human life. Education is not the adoption and perpetuation of some devious system for regulating a pessimistically accepted animalism. It is the outright cultivation of nonanimal potentialities. Its highest function is the exploration of the nonscientific and the nonautomatic, and the development of that obvious human potential for subverting and transcending the falsely simple logic of a ruthless fixity in the living universe.

Man is essentially a *feeling* creature, and yet it is the inescapable complex of *thought* and *feeling* which denies either a simple rationalism or a naive spirituality as a basic human formula. This either/or conflict of the ages between the mystic and prosaic, or between a divine and a secular-rational attitude, is the clearest

proof that among men the two elements thus striving for ascendance are perhaps the chief components of self-consciousness. The self-awareness of man is, in fact, a literal groping for the soul-concept and an inevitable picturization of that abstraction. We have most recently pondered the seeming enlightenment of "experimentalism" in which, according to Dewey and modern science, this picture of man's soul is the poorly disguised *machine* rather than the hovering ghost of tradition. Needless to say, this modern formulation is even less appealing than the older anthropomorphic picture, and thus our renewal of former faiths is an overt rejection of such a distasteful substitute visualization.

Education is the outright rejection of all such dreamy blueprints and specifications rather than the heretofore conceived implementation of them. Existing as an unmistakable but mysterious potentiality, man's spirit is bound only as *we bind it* to some such preconceived inanity. The self-enslavement of mankind to a conformity with various scientific analogies is no less stultifying than the older tradition of an outright acceptance of mythics and miraculous legend. That which can be drawn as a picture is mere sensory experience and offers no clue to a concept which is linguistically transcendent. We have perhaps been unable to accept the "soul" because of its association with these fanciful picturizations, and yet the ultimate mystery of life is deepened rather than simplified by such a rejection.

Our presently pretentious simplification even of the processes of intelligence would dictate the naive alternative of selecting either an inductive or a deductive approach. It would seem that we have either to posit a "soul" or else inductively to arrive at some conclusive understanding of its nature. The brashness of science is nowhere more evident than in this pretension of a millenial wisdom already achieved. Here is the epic example of man standing over man and literally over God. Education is not a conformance to such preconceived "rules" of thought, but it is rather an utter freedom from them. No aspect of the educational role is more important than the continual pushing-beyond function. Our colossal ignorance would seem to obviate the urging of such a purpose in education, and yet the insidious hampering pattern continues to enslave our weakly submissive intellectual endeavors. Childishly amazed at our microscopic probings among the wood-and-stone artifacts of the world, we are now grandiosely engaged in transferring this "boy-mechanic" deftness to problems utterly transcendent in their relation to atomic structure and to the superfices of "earth, air and fire". Without unduly deriding these earthly wonders and their importance to our physical sustenance or destruction, we can at least relegate them to their proper conditional relationship. They are merely a part of the given category of physical existence. Life itself is infinitely more wondrous and yet even it is simply a gratuitous condition from which the spark of intelligence must move upward and outward. We have perhaps gloated and exulted sufficiently long about our superior "adaptation" of the environment and about our easy triumphs over the lower animals. It seems high time that we begin to employ our intelligence as more than a glowering instinct-substitute. If its purpose never transcends physical motivations, it is undoubtedly a dubious substitute for the automatism of instinct, and *we must clearly see that human history has demonstrated its potential liability in the universe.*

V

That element of man's "selfhood" which has appeared in all ages as the single opening in an otherwise closed system is, of course, a malleable, aspiring potential which is peculiarly educable because it is not characterized by "necessary" determinants. Man's distinction from the lower animals is in the vastly superior extent of this educability and in the inclination and superior power to violate and oppose the "laws" which stifle and sadden physical existence. That the consciousness of such a power would point man's aspirations obsessively toward a *transcendence of death* is not only an earmark of wilful purposing in nature, but is the essential impingement of self-consciousness upon the innate principle of all life. Needless to say, we can only define life as an *opposition to death.* Underlying every identifiable instinct or motive of the life principle and occurring in every sentient and organic creature there is apparently this single conscious or unconscious *purposing* element.

At present, our highest conscious conception of this purpose is the logical visualization of an organized effort to preserve human life wherever it exists. Our continuing social challenge is in the formulation of media for an extended primacy of human life through an everwidening extension of cooperative group effort toward its preservation. The well-recognized educational task of the present is one of universalizing and implementing this simple and fundamental assurance of life to the living.

Yet, disclaiming the extraordinary blindness and arrogance of traditional intelligence, we must clearly accept and understand the innate selfishness of such a goal. Beneath the seeming humanitarianism of a "universal-rights" conception is the inevitable but artfully disguised secret longing of the individual for that security which none can truly feel until all have completely accepted a trust in man's humanity to man. It is inconceivable that we are pessimistic about the larger abstractions relating to man's ultimate potentiality when we have not yet achieved the merest balance or stability in these fundamental "tottering first steps" of intelligence. We have felt only vague and promising intuitions of real selflessness. Our striving will-to-live is the sole continuing operative, and an awakening purpose lies mysteriously beyond these inchoate struggles toward a necessary first condition of survival. Educationally speaking, man already shows the unmistakable capability of accepting the limitations of existence external to himself and his kind and of imposing upon them a selfless identification with almost any cause. Education is the necessarily constant reformulation of this extending cause, taking its submissive cue from that which is yet mysteriously unknown. It is the continuing act of postulation and purpose rather than a medium of halting enforcement. This is true because man has the unmistakable soul-element which dreams and formulates beyond mere instinct or life-impulse and especially because education is the only avenue to a progressive realization of any of our rational or creative aspirations for mankind as a whole.

"TALKS TO TEACHERS ON PSYCHOLOGY" BY WILLIAM JAMES

BY GEORGE MACIUSZKO

IT IS NOW OVER HALF A CENTURY SINCE WILLIAM JAMES HAD BEEN ASKED by the Harvard Corporation to address Cambridge teachers in several public lectures on the subject of psychology. The lectures were given in 1892, and they were later printed in a small volume modestly entitled *Talks to Teachers*. They were reprinted in 1939, and appeared with an introduction by John Dewey and William H. Kilpatrick. The natural question which may first come to our mind is: Is there anything in this book which may still be of value to a teacher today? The fact of its being reprinted in 1939 is not yet a final proof of its timeliness, because John Dewey seeing in it an "emphasis upon the active and the motor" had a very good reason to see the talks in print, while the writing of the introduction gave him a good opportunity to point to William James as a predecessor of what later became known as behaviorism.

Talks to Teachers is much more than a document of William James's belief that teachers should think of their pupils in terms of "behaving organisms". In fact, the "Talks" may be read and admired today by a traditionalist as well as a believer in an extreme progressiveness in education. Both will find in the book something worth noting; the book transcends any "partisan" views on educational theory, and though some of the author's statements may have become obsolete, his genius has a universal appeal.

If we sat down to write a review of the "Talks", we would have to discuss the book as a whole, then dwell on the chapters which may have a specific appeal to a teacher of today, and finally draw some conclusions. Our task here is different. To us the most important problem is how were the views of William James related to the main trends of the educational theory which were permeating the schools of his day. James took for granted that his listeners were familiar with the ideas of Herbart and Pestalozzi. He was bringing them the results of research of his day in psychology. The question is, how did they fit into the ideas which his listeners were following in actual practice at school.

In the chapter on memory, William James gives his view on what he considers an ideal product of education. ". . . When both memory and philosophy combine together in one person, then indeed you have the highest sort of intellectual efficiency. Your Walter Scotts, your Leibnitzes, your Gladstones, and your Goethes, all your folio copies of mankind, belong to this type."[1] James attacked the parrot-like training of memory which had been a prevalent practice in schools, until the Oswego movement and other theories taking their root in the teachings of Pestalozzi began to question it. According to James people with a retentive memory for names, dates and quotations may otherwise be "very stupid men".

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[1]P. 121.

It had been Pestalozzi who had objected to recitation without the understanding of the meaning of the words recited. This seems so obvious to us today that we may easily underrate Pestalozzi's accomplishment. Now William James came along with the results of his research in psychology, and stated that "the secret of good memory is thus the secret of forming diverse and multiple associations with every fact we care to retain . . . Of the two men with the same outward experiences, the one who thinks over his experiences most, and weaves them into the most systematic relations with each other, will be the one with the best memory."[2] Could the idea of Pestalozzi be more triumphantly confirmed than it is in the light of this statement?[3]

On the purely scientific ground William James could not help being a child of his age. His statement "that the memory, in the sense of a general elementary faculty, can be improved by training, is a great mistake"[4] seems to be challenged by the science today.[5] The greatness of William James lies in the fact that he is far more than just a psychologist interpreting to teachers the newest discoveries in his field to help them teach more "scientifically". He is a philosopher of vision with an intuitive sense of proportion. He clearly sees the danger of falling into a trap of any one, all-saving method. The following quotation should suffice as an example of the philosopher's breadth of vision: "The excesses of old-fashioned verbal memorizing, and the immense advantages of object-teaching in the earlier stages of culture, have perhaps led those who philosophize about teaching to an unduly strong reaction; and learning things by heart is now probably somewhat too much despised."[6]

The proper understanding of the faculties of memory (James makes it clear that it is more than one faculty) is a key to the understanding of Herbart's first of his five "formal steps", viz., that of preparation, and James makes a direct reference to this Herbartian principle in his chapter on interest, stressing the importance of "correlating the new with the old".[7]

This "many-sided interest" and the correlation of subject matter so emphatically put by Herbart made a very strong appeal to the teachers in this country. If we keep in mind that William James delivered his talks in 1892, and that Herbart died in 1841, we shall realize that Herbartian principles were known to the teachers addressed by James mainly through the efforts of Charles de Garmo and the McMurry brothers who had become enthusiastic supporters of Herbartian theory during their studies at the University of Jena. In 1892 the wave of Herbartian movement was close to its climax, as it was three years later that the National Herbart Society (the future National Society for the Study of Education) was established.

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[2]P. 123.

[3]James pays another, indirect tribute to Pestalozzi by stating, what has been quoted by Dewey and Kilpatrick in their introduction, viz., that "psychology is of avail to the teacher only as the teacher is possessed of sensitivity, tact, and power of divination as to the life-processes of other human beings." P. IV.

[4]P. 130.

[5]Dr. Bruno Furst, in his book *The Practical Way to a Better Memory*.

[6]P. 131.

[7]P. 97.

It is interesting to note that in this instance James made a reference only to the first of the five formal steps, as though making it clear that there were grains of truth in Herbartian principles, but that his theory could not be accepted as a final word in education. The five formal steps fell out of use just because they had been adapted by uncritical teachers for general use as an all-saving method.

As it has been said, James gave a scientific justification to many educational theories and practices which had been started either entirely unscientifically (as in the case of Pestalozzi) or semi-scientifically (as in the case of Froebel). In offering a programme for teachers to arrest the attention of a child, he mentioned some of those methods by name. Here are his words: "Begin with the line of his native interests, and offer him objects that have some immediate connection with these. The kindergarten methods, the object-teaching routine, the blackboard and manual-training work—all recognize this feature."[8]

It is impossible to close a discussion of the "Talks" without saying a few words about the strong emphasis placed by the author on habit. He said: "Your task is to build up a character in your pupils; and a character . . . consists in an organized set of habits of reaction."[9] If we now bear in mind that in his definition education meant "little more than a mass of possibilities of reaction, acquired at home, at school, or in the training of affairs",[10] we shall understand how important to our author was the process of the forming of such habits. It is in the chapter on habit (which is so precious to the behaviorists of today) that he made the famous statement: "Don't preach too much to your pupils or abound in good talk in the abstract . . . The strokes of behavior are what give the new set to the character, and work good habits into its organic tissue".[11]

There is no place for us to pursue the subject in this essay. For our purpose it is more important to state that the emphasis on character-building can again be traced through the Oswego movement to Pestalozzi. The stress on the character as an important factor in educating a child had already been contained in those few aphorisms jotted down by Pestalozzi at the very beginning of his career in 1779.[12] At that time the great teacher considered himself a bankrupt both as a farmer and as an educator. Pestalozzi's stress on the moral side of education was different from that of Puritans. Their principle could be defined as an indoctrination rather than a character-building in the true sense of the word.

Summing up: The *Talks to Teachers* is more than a document to justify the case for behaviorism or a historical document showing how educational theory based on intuition preceded scientific discoveries made in the laboratories of psychologists. Some of the views of William James have become obsolete, some of his principles are no longer valid in the face of modern science, but, despite all that, his little book will always remain an inspired document of a man of genius.

Can there be a greater praise?

[8]P. 96.
[9]P. 184.
[10]P. 38.
[11]P. 71.
[12]These aphorisms have become later known as "The Evening Hour of an Hermit", (Die Abendstunde eines Einsiedlers).

EMERSON ON EDUCATION

BY LAWRENCE H. MADDOCK

Ralph Waldo Emerson had small regard for writings on education. They affected him, he complained, with "slight paralysis and a certain yawning of the jaws." Nevertheless, Emerson himself wrote on education—chiefly in the *Journals*, *Education*, *Culture*, and *The American Scholar*—with characteristic enthusiasm.

Inspirational and abstract, Emerson is a transcendentalist in educational theory. And the core of transcendentalism is intuition, "that deep force, the last fact behind which analysis cannot go". Emerson sees an all-pervasive God or Over-Soul flowing into every person, making him self-sufficient with revelations of truth. Emerson does not reject the sensory or the physical, but he never considers scientific knowledge as the only knowledge open to man. Recognition of knowledge beyond sense experience, and reliance on intuition allies Emerson with profound philosophers and, it must be admitted, ordinary lunatics.

H. D. Gray calls Emerson's thought "pragmatic mysticism". Emerson is a mystic, but after a Yankee fashion, so that he is sometimes called ancestor by the pragmatists. Emerson would approve much that is good in contemporary education and he perhaps points the way for avoiding some of its pitfalls.

Emerson's first idea on education is that learning is as broad as experience. The child begins in the home to learn "the tragi-comedy of human life". The external world exists for his mind. Every landscape educates. Emerson regrets that in training boys "we scarce educate their bodies. We do not train the eye and the hand" (*Education*). Any lopsidedness in moral, physical, or intellectual training is vicious. Emerson remarks in his *Journal* (1841): "I like to have a man's knowledge comprehend more than one class of topics, one row of shelves. I like a man who likes to see a fine barn as well as a good tragedy."

Books, according to Emerson, are among the best of things, but "Man Thinking must not be subdued by his instruments. Books are for the scholar's idle times" (*American Scholar*). Thinking presumably of these "idle times" he writes in his *Journal* (1842): "Thou shalt read Homer, Aeschylus, Sophocles, Euripides, Aristophanes, Plato, Proclus, Plotinus, Jamblichus, Porphyry, Aristotle, Virgil, Plutarch, Apuleius, Chaucer, Dante, Rabelais, Montaigne, Cervantes, Shakespeare, Jonson, Ford, Chapman, Beaumont and Fletcher, Bacon, Marvell, More, Milton, Moliere, Swedenborg, Goethe." Although the scholar or man thinking is no book-worshipper, "of course there is a portion of reading quite indispensable to a wise man. History and exact science he must learn by laborious reading" (*American Scholar*).

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The right function of books, however, is to inspire. Books, for Emerson, are "but crutches, the resort of the feeble and lame, which if used by the strong, weaken the muscular power, and become necessary aids." (*Journal*, 1837). Emerson's great fear is that books may replace man's own powers of intuition and reason. The bookworm is one who "values books as such; not as related to nature and the human constitution, but as making a sort of third estate" (*American Scholar*).

Learning for the sake of learning is for Emerson essentially silly. To what purpose do we read? "A cultivated man, wise to know and bold to perform, is the end to which nature works, and the education of the will is the flowering and result of all this geology and astronomy" (*Man the Reformer*). Emerson makes clear again and again that he has a humanistic ideal: man is the end. Education should produce men before it makes accountants, attorneys, engineers. "The great object of Education should be commensurate with the object of life. It should be a moral one; to teach self-trust: to inspire the youthful man with an interest in himself; with a curiosity touching his own nature; to acquaint him with the resources of his mind, and to teach him that there is all his strength, and to inflame him with a piety towards the Grand Mind in which he lives" (*Education*). Central to all Emerson's ideas is his notion that man is an inlet to the absolute. The learner is a latent god and his own resources provide his richest source of power.

Emerson suggests that the two capital elements in education are genius and drill. Genius is originality and enthusiasm. Drill is "the power of use and routine," precision, correctness. Emerson would require the student "to call things by their right names. Pardon in him no blunder" (*Education*). Tolerate in him no fuzzy-mindedness. Emerson values habits and appreciations above any particular knowledge, but he sees those habits and appreciations based upon scholarly drudgery.

Although the secret of education lies in respecting the pupil's self-sufficiency, education for Emerson is hardly permissive. Respect the child, says Emerson, but also respect yourself. Be no "kinsman of his sin, let him find you . . . the irreconcilable hater of his vice and the imperturbable slighter of his trifling" (*Education*). The high-born candidate for truth and virtue, the god in chrysalis, is not to be indulged in fooling, horseplay or even whispering in class.

Emerson himself, at eighteen years of age, was an austere teacher in his brother's school for girls. Although no one laughed when young Ralph overtipped his chair and sprawled backward, Emerson came to know the impudent grins and silly giggles of an actual classroom. In a somewhat humorous passage in the lecture *Education*, he gives a refreshingly realistic picture of a teacher's practical difficulties. Most students, says Emerson, are more sensual than intellectual. They have appetite and indolence, but no enthusiasm. "A sure proportion of rogue and dunce finds its way into every classroom . . . and the gentle teacher, who wished to be a Providence to youth . . . knows as much vice as the judge of a police court" (*Education*).

Emerson confesses himself at a loss in suggesting particular reform in educational procedure. His only panacea is to return to the method used at the mother's

knee, where "the child is as hot to learn as the mother is to impart" (*Education*). Emerson would extend this natural human relationship to algebra, chemistry, and history. Communication between one eager to tell the new fact and the other eager to hear is "the method of nature," neither mechanical nor military. Teaching should be a "tranquil ministry." The teacher's function, like the function of books, is to inspire. "Truly speaking, it is not instruction, but provocation that I can receive from another soul" (*Divinity School Address*).

Various entries in Emerson's *Journals* indicate his belief that university training is for the talented. After appointment to the Board of Visitors to the United States Military Academy at West Point, Emerson comments that "the point of competitive examinations should be urged on the Congress, and that a severer preliminary test should be required for admission. The Academy should be relieved of teaching to spell and parse English" (*Journal*, 1863). In general, Emerson highly approved what he found at West Point: "I think it excellent that such tender youths should be made so manly and so masterly in rough exercises of horse and gun and cannon and muster; so accurate in French, in mathematics, geology, and engineering, should learn to draw, to dance, and to swim" (*Journal*, 1863). Emerson warns the university to "be sure that scholars are secured . . . and that real examiners and awards are before him" (*Journal*, 1866).

Emerson would have no subject given disproportionate time, and he is most critical of Harvard's emphasis on mathematics. Emerson was aroused against Harvard by seeing four "skeletal sufferers" who found all studies attractive except mathematics and found this thrust into first place. This episode inspired him to suggest a college curriculum: "Language, Rhetoric, Logic, Ethics, Intellectual Philosophy, Poetry, Natural History, Civil History, Political Economy, Technology, Chemistry, Agriculture, Literary History . . . Music, and Drawing even . . . as well as mathematics" (*Journal*, 1864).

Some ideas in Emerson which educators today might well consider are:

1. Large ideals have value in education.
2. The primary value is the individual.
3. Teaching must, inescapably, be to individuals.
4. Respect for the child does not mean respect for his missteps.
5. Man is first man, secondly a specialist.
6. Schools should prepare for education as broad and as long as life.
7. Education should provide for the rounded development of physical, moral and intellectual powers.
8. Creative thinking should be valued above bookishness.
9. Education is communication to which enthusiasm is necessary.
10. Discipline is necessary to education.

Finally, Emerson gives valuable and practical advice when he says: "I advise teachers to cherish mother-wit. I assume that you will keep the grammar, reading, writing, and arithmetic in order; it is easy and of course you will. But smuggle in a little contraband wit, fancy, imagination, thought" (*Education*).

REASON AND/OR EMOTION?

BY WILLIAM S. KRAEMER

THE TURMOIL OF WORLD EVENTS HAS BROUGHT IN ITS WAKE CONSIDERABLE DESPAIR regarding the potency of reason. Escapes to emotionalisms of many varieties, existentialisms, mysticisms, hedonisms, and intuitionisms indicate that the status of reason is seriously challenged. It appears appropriate, therefore, to resurrect the time-worn controversy of reason versus emotion.

It is perhaps a truism that man has always been interested in reason. Plato thought that ". . . an unexamined life is not worth living", and Aristotle inaugurated the first book of his metaphysics with the statement that "All men by nature are actuated with the desire of knowledge." Moreover, for Plato, the "examined life" is to be achieved by reason, by rational principles which are in essence *sine qua non* conditions of life of reason; similarly, Aristotle would not have countenanced an irrationalism; for reason enshrined as the paramount human attainment was the ultimate judiciary.

Despite the agnostic's doubts and the sceptic's cynicism, it may be contended that metaphysics plays a part in determining the concepts and theories to which we give our approbation. For example, we may believe that the ontological structure of the universe consists of self-contained atoms, that these atoms are fortuitous in character, and that no *rapport* between them is possible. In such a metaphysics the propositions which are inferred become just as contingent as the blind irrational atoms; for where could one find definiteness and logical organization in a continuum which instills a complete diremption between its atomic constituents? Consequently, if we posit a chaos it becomes difficult to validate *reason*, for reason itself would be subject to the limitations of chaos. Hence we find that two conclusions may be drawn from a metaphysics of this type; either there is no such thing as reason, with rules of logic that are invariable, or, whatever *reason* may accrue from such a system would have temporal instability; *i.e.*, it might be applicable in one temporal context and inadequate in other contexts. Even so, our second alternative would be subject to the limitations of probability, and one could affirm that where everything is probable, nothing is probable.

The illustration above is opposed to the kind of metaphysics that has been espoused by those who have enshrined reason as the supreme accomplishment of humanity. For them[1] life is not in a continuous Heraclitean flux, but has a semblance of definiteness. There are definite rules of logic by means of which we can rationally ascertain and arrive at certainty; and, to affirm the existence of such rules of logic, of reason, it is necessary to conceive of the world as a rationally organized thing—rational, at least, in so far as it permits us to set up rules by means of

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[1]Plato, Spinoza, Kant, Hegel, idealists and rationalists generally.

which to evaluate the existing content. The theories that are held by this group definitely impinge upon, and are impinged upon by their fundamental metaphysics.

It is true that the manner in which we become aware of our metaphysics is open for analysis. It may even be as Bradley suggests that "Metaphysics is the finding of bad reasons for what we believe upon instinct."[2] But the grounds of assent are irrelevant at this phase of our investigation. Even though bad reasons are put forward for what one believes on instinct, nevertheless, the fact remains that something *is* believed; and it is in terms of this belief, this metaphysics, that we affirm or deny the validity of our conceptions. Moreover, it should be observed that it is not necessary for an individual to be consciously aware of the presuppositions that bring about his predilections for certain ideas rather than others. He may (as many scientists do) discountenance the suggestion that he is fostering a certain metaphysical notion and surveying worldly data through its lens. However, he cannot evade having such doctrine, and careful analysis reveals its presence. It may even be asserted that the fact that one denies having a metaphysics is indicative not that he has no such bulwark but that he does have a particular type of metaphysics; for it could be said that negation is merely an affirmation of the second degree, *ergo* in denying, I am affirming.[3]

REASON IN THE KNOWING PROCESS

Let us now turn to the epistemological phase of the matter in question. An immediate difficulty confronts us, which may be stated in the following questions. "At what stage in the knowing process does reason appear?" "Do experiences which involve little reflection require reason?" "Does ordinary perception necessitate reason?" This enmeshes us in the midst of epistemological controversies concerning the manner in which we know. For example, if Kant's Copernican revolution in regard to the role that the mind plays in knowing is correct, then even the lowest form of knowing, or the form of knowing which includes the smallest number of relations, requires an activity of mind, of reason. If, however, the mind is, as Locke claimed, a *tabula rasa*, which is filled up by sensations, then it appears that the reception of these sensations adds nothing to them; that reason plays a very small role indeed. William James tried to resolve the difficulty with a radical empiricism. He postulated a monism (a world comprised of one primal stuff) and emphasized neither the "knowing" nor the "known" in the subject-object relationship. His democratic solution equalized the importance of the two factors; for what appears as "mind" in one contextual relation may be "object" in another relation.

The attempt to make truth and falsity intelligible is the central epistemological enterprise. For example, the representative perceptionists or epistemological dualists posit the existence of what Broad calls the *sensum* and Russell the *datum*, as the intermediary between the object *per se* and the conscious percipient. However, by postulating a transcendent *ding an sich*, and by maintaining that we can only become aware of phenomena, which are merely manifestations of reality, they forever remove the possibility of comparing what we are actually aware of with

[2] F. H. Bradley, *Appearance and Reality*, Preface, xiv.
[3] *Cf.* H. Bergson, *Creative Evolution*, p. 288.

reality. What then, becomes of the problem of truth with these representative epistemologists? Either they must blindly assume that perceptual content by some pre-established harmony is synchronized with the realm of reality, or tacitly admit that we can never know whether our knowledge is compatible with the world of reality; another alternative would be to deny the existence of any substantial realm apart from the phenomena that are manifested for us; to become phenomenalists—to assert that the mere phenomena are not only all that we can be aware of, but *all that there is to know.* However, if the last solution is chosen there is the danger of verbally accepting a phenomenalism but actually invoking a substantialism, *i.e.*, the phenomena tend to be hypostatized, for, it is difficult to conceive of disembodied phenomena. It is also quite likely that, if an aversion to substantialism is manifest, some type of subjectivism or even solipsism may result. It is interesting to note that most of the great exponents of reason have opposed a dualistic epistemology.

Just as indirect perceptionism cannot account for truth, direct perceptionism cannot account for falsehood. For, instead of the triadic "subject-sensum-object" relationship that the dualistic epistemologist uses, the direct or immediate perceptionist postulates a single subject-object relation. However, even though he arrives at truth, how can he account for illusion, for dreams, for all types of reality that appear just as real to the percipient, at the time of the relationship, as the world of corporeal existentiality? What becomes of the stick that appears bent in water, of the railroad tracks which seem to converge in the distance, of the star that can now be seen but which astronomers prove to have been extinguished years ago? Professor Alexander, the illustrious British thinker, wrote in *Space, Time and Deity* that our images are actually real but that they are merely dislocated in space. Therefore, if I dream of a cathedral that has the beautiful Cologne Gothic exterior, the Chartres interior, and gargoyles from Notre Dame, according to Alexander's dislocation theory the accretions which combine to make this new product are all real—they are merely displaced. It is difficult to accept such an answer, yet it is perhaps the best of the direct perceptionist attempts to solve the problem of error.

REASON AND EMOTION

Thus far we have shown the manner in which epistemologists deal with extrinsic data. An optimistic observer might say that with intrinsic data it is all very different, that we have here less confusion and more surety. To be sure, reason and emotion are intrinsic and to investigate them we must look inward; however, sad to say, the situation is not at all clarified, and if modified at all it is in the direction of more confusion. It seems that for an accurate analysis of a concept like reason it would, perhaps, be necessary for "knower" and "known" to merge, for we are investigating that in terms of which we operate, by means of itself—truly an audacious proceeding. Furthermore, we cannot harness reason itself for investigation. We attend, if we do not give up in despair, to particular manifestations and not to reason in general. The same situation prevails with regard to *emotion.* It is like analyzing a spark plug in order to understand an automobile. Nevertheless, we have no other method open to us. For example, in dealing with emotion we may give an *a priori* solution in terms of energy, as

Morton Prince did, or we may analyze a particular emotion—love, fear, anger, as the case may be. We notice certain physiological accompaniments of emotion and either hypostatize these physical changes so that they constitute the emotion, or state that the emotion is something different from them; that it either accompanies, causes, or results from these physiological changes. But what have we proved?

How, then, can the difficulties inherent in such concepts as *reason* and *emotion* be resolved? In the light of recent psychological literature we have become aware of the value of *emotion* for a completely integrated life—neglect of this sphere will result in maladjustments. Nevertheless, most individuals would hesitate to place confidence in an emotional decision, especially if the issue is important. We have observed the disagreements that prevail among the epistemologists regarding knowledge, truth and falsity. We have become aware of the significance of our metaphysical presuppositions in evaluating the concepts of reason and emotion. Is there any resolution of these difficulties?

Perhaps the most illuminating point about reason is that exponents of all types of views, e.g., rationalists, *a priorists*, intuitivists, and mystics of every sort and variety—all seek justification by reason. The very repudiation of reason requires rational grounds for the repudiation. The excesses of dictators, the glorification of force, the deification of pleasure, even the very suppression of reason itself—all attempt justification and substantiation at the bar of reason. It appears that our evaluation of reason has altered little since the days of Plato and Aristotle; that we still believe *reason* ought to make decisions and are loathe to confess that we are guilty of irrational actions. If this is true, then emotion ought rightly to be subservient to reason. It may be argued that this is difficult; but in the words of Spinoza, "Things really excellent are as difficult as they are rare."

CHOICE, CHANCE, AND CHEATING

BY ELMO A. ROBINSON

CONSIDERABLE CONFUSION ARISES IN THE MINDS OF BOTH TEACHERS AND STUDENTS concerning such concepts as chance, probability and normal distribution, when these ideas are shifted from tossing coins and throwing dice and applied to the determination of scores and grades. The purpose of this discussion is to clarify these concepts in this context to the end that both their values and their limitations in education may be understood.

The word *chance* has more than one meaning. In connection with mathematical formulae, however, it refers to events which are random. A random event is one which is equally likely to occur in any one of two or more possible ways. Random events are illustrated by the behavior of an "honest" coin or die or roulette wheel. Each is equally likely to come to rest in any one of its two or six or 37 positions.

If the roulette wheel is found to stop on some one number more frequently than upon the others, suspicion is aroused that the events of its behavior are not random events, but that it has been accidentally misplaced or intentionally rigged to cause it to behave as it does. This situation calls our attention to the distinction between mathematical probability and empirical probability. Mathematical probability is a prediction, or may be made the basis of a prediction, of what will happen, provided that the events to which it is applied are truly random events. Empirical probability is a prediction, or may be made the basis of a prediction, of what will happen, provided the events to which it is applied continue to occur in the future with the same frequency as observed in the past. When observed facts, or the empirical probabilities based upon them, differ from mathematical probabilities, one suspects that the events may not be random events.

This distinction may also be illustrated by referring to the tossing of a penny. It is said that the probability of obtaining heads is one-half. If the penny has not yet been tossed, this is a statement of mathematical probability. What does it mean? It means that, *provided* the penny is a "fair" penny (weight equally distributed) and *provided* it is tossed fairly (neither heads nor tails being favored), then for a single throw the chances of getting heads or tails are equal. For a series of throws of a single penny (or for a single throw of several pennies) the probability of getting all heads is less than one-half, the probability decreasing with the increasing number of throws (or pennies). Thus the theory of mathematical probability, contrary to the layman's idea of it, does not predict that in a thousand throws of a single penny it will fall heads exactly 500 times. Rather it asserts that, of all the combinations which may occur, this is the most likely.

But there is nothing in any statement of mathematical probability that gives information about a particular penny, or prescribes how it must behave. The only method of discovering whether a penny behaves as predicted is to toss it

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and record the empirical results. If tossed a thousand times most pennies give statistical results that approximate mathematical expectation of the most likely result. But no law of nature compels every penny, when thus tossed, to do this, and some do not. And no penny, when tossed an odd number of throws, can possibly fall heads in exactly one-half the total throws.

Similarly there is nothing in any statement of mathematical probability that can give advance information about how a particular student will respond to any given examination question, nor to the complete set of questions. It cannot give advance information about how any group of students will behave in an examination. The only method of discovering how a student behaves or what his score will be is to give the examination and record the empirical results.

CHANCE AND PROBABILITY IN TRUE-FALSE TESTS

Now let us consider the application of these principles to the behavior of a student in selecting his responses to a true-false test. It is often said that the possibility of selecting by chance the correct response for a single true-false statement is one-half. This is a statement of mathematical probability. If examined critically, the assertion has the following meaning. First, it implies that the question (or statement) is a "fair" question. Here "fair" is used in the same sense as in the phrase "a fair penny." It means that the item is not loaded; it is so worded as not to suggest one response more strongly than the other. Secondly, it implies that the student's selection of his response is "a fair throw." In other words, he has no glimmering hunch that one response is more likely to be correct than the other. Perhaps he does not even understand the meaning of the statement, correctly or incorrectly. He is not using some hypothesis in the selection of his response, such as the hypothesis that the instructor has probably provided as many true items and false. But in practice these conditions of random response are difficult to provide. If one is to be certain of providing them, the instructor should so cover the statements that they cannot be read by the student, or symbolize them so that they cannot be understood, or else omit them entirely, leaving the student to jot down his responses at random, perhaps by tossing a coin.

In actual test situations, however, the student is expected to read the statements before writing his responses. It may be that occasionally a student has zero knowledge about the material upon which he is being tested, but this is doubtless rare. It may be that he has zero knowledge about some items, but some positive knowledge about others. But it would be difficult to be certain of this. It seems more likely that often he will have at least some fragmentary knowledge, some unconscious hunch, even when he supposes himself to be totally ignorant. Under such conditions his choices will not be random choices and the theory of mathematical probability will not apply. His responses will not constitute the "fair throws" which the mathematical theory presupposes, unless indeed he does resort to some device as tossing a penny.

The question may be raised whether a test item ought to be so constructed as to be like a "fair penny." It would seem that usually the correct answer should not be suggested by the form or wording of the question. Whether the instructor sometimes feels justified in so wording or structuring the question as to suggest the incorrect answer is a problem in ethics. But if there is a suggestion one way or the other, the question is "loaded" rather than "fair."

There are other popular misconceptions of the application of mathematical probability to test situations. It is sometimes said that in a test made up of true-false items a student should (or even that he will) respond to one-half of them correctly by chance. This statement is mathematically false and empirically uncertain. For reasons stated in the foregoing paragraphs the student's responses are not random and the laws of mathematical probability do not apply. And even if they did apply, the prediction here, as with the tossing of a coin, is not that his responses will be correct in half the instances, but rather, that of all possible combinations this result is more likely to occur than any other.

When empirical studies are made (analogous to the actual tossing of a coin) the results may or may not agree with prediction made from mathematical theory. That is, it is extremely unlikely that answering a series of test items by tossing a penny will supply an equal number of correct and incorrect responses. It is not unusual to find that on some tests an occasional student has a score lower than that predicted as the most likely score by chance. On the other hand, there is no reason for denying the possibility that on a given test a student might obtain a perfect score by chance.

This discussion has sought to correct the common notion that incorrect answers are guesses, in the sense of being purely random answers. It also challenges the theory that there must necessarily be as many correct as incorrect guesses, and that therefore the number of incorrect answers should be subtracted from the number of correct responses to obtain a measure of what the student really knows. Such a device may perhaps work fairly well in the long run, but it cannot be logically justified for individual students for a given test. To the assumptions already implied by popular interpretations of chance this notion adds still another assumption: that the student either knows or does not know the correct responses. If one defines *knows* in a certain manner, then the assumption is a logical truism. But this will not avoid the practical difficulties in deciding just where to draw the line between knowledge and ignorance. Plato thought it necessary to recognize a middle ground of "opinion" between them. Certainly there is a realm of semi-clear ideas that are difficult to classify as either knowledge or ignorance. If our knowledge be limited to those ideas about which we are perfectly clear, most of us are very ignorant.

The instructions sometimes given to students either to guess or not to guess when they do not know involves one furthur assumption: that a student can distinguish between four types of situations—knowing that he knows, not knowing that he knows, not knowing that he does not know, and knowing that he does not know. Socrates has been considered the wisest man in Athens for knowing that he was ignorant. Students who imitate him by omitting responses when they know that they do not know the answers ought to be given high grades for their wisdom. But so far apparently no one has designed a test which can distinguish between an omission for this reason and an omission due to not knowing that one knows the answer. Failure to answer a question, therefore, may indicate either confidence in one's ignorance or lack of confidence in one's knowledge. Answering a question incorrectly may indicate pseudo knowledge or a confusion and conflict about the ideas in which one should place confidence.

By the principles of mathematical probability, that is, provided that each

true-false response is a purely random selection from two equally probable responses the probability of a perfect score by chance on a 100-item true-false test is ½ raised to the 100th power, a very small quantity. Nevertheless, there is nothing in this statement that denies the possibility that a student might obtain a perfect score by random responses. What the statement does tell us is that it is extremely unlikely that he will do so, and much less likely that a group of students will do so, or that a single student will do so on several occasions. If a student turns in a "perfect" paper, it is extremely likely that the correctness of his answers is not due to random responses, but that it is due to some definite cause or causes. Possible causes are: the student was unusually well prepared and knew his stuff, or he was unusually clever at cheating, or the test was too easy, or the items were so poorly worded as to give clues pointing to correct responses. If, but only if, the test has been properly constructed and effective precautions have been taken to eliminate unfair practices, the most plausible conclusion is that the student with perfect score has passed the test with high standing.

CHANCE AND PROBABILITY IN MULTIPLE-CHOICE TESTS

Let us now consider the more complex case of a multiple-choice item with five possible responses—one correct plus four incorrect. This cannot be analogous to the tossing of coin or a die, since neither has five sides. It is analogous rather to a pack of cards, in which there are an equal number of cards numbered 1, 2, 3, 4 and 5, respectively. Assume that a student shuffles his cards, draws one at random, and selects the numbered response which the numbered card indicates. The probability of getting the correct response is said to be one-fifth. This is sometimes erroneously interpreted to mean that, if he responds to five items by this method, one response will be scored correct, or that, if five students respond to a single item by this method, one of them will have his response scored as correct. What should be said is that, if responses are made by the method of chance to a quintuple-choice test of five items, any of the possible combinations of correct and incorrect responses may occur, but with differing probabilities. These probabilities are as follows.

Correct responses	Incorrect responses	Probability of occurrence	Number of predicted occurrences in 3125 trials
5	0	32×10^{-5}	1
4	1	64×10^{-4}	20
3	2	51×10^{-3}	160
2	3	21×10^{-2}	640
1	4	41×10^{-2}	1280
0	5	33×10^{-2}	1024

That is, one response correct in five trials is the most likely outcome, but any of the other combinations from none correct to all correct may occur. Which result actually occurs can be determined only by experiment. Note that the probability of one correct response is not exactly one-fifth (20 hundredths) but 41 hundredths.

The usual assertion that in a quintuple-choice test a student will respond correctly by chance for exactly one item out of five is equivalent to saying that this outcome is certain, or that its probability is 1.0. Actually the probability of this outcome for a test of only five items is, as the above table indicates, only 0.41. For a test of 100 items it is much less. That is, the greater the number of items, or the greater the number of tests, the less likelihood there is of obtaining by chance an exact ratio of one to four between the correct and incorrect responses.

These considerations reinforce what has been said concerning the interpretation of responses to true-false items. It is questionable to conclude, solely from the application of the theory of probability, that any given response is a random response or that any specific number of responses are random responses. On the other hand, it is possible that a student may submit a "perfect" paper, in which all the responses have been obtained by random choices. But that this is extremely unlikely is indicated by the following table.

Type of Test	Number of Items	Probability of a Perfect Paper by chance
True-false	50	8.89×10^{-16}
True-false	100	7.89×10^{-31}
Quintuple-choice	50	1.13×10^{-35}
Quintuple-choice	100	1.26×10^{-70}

PROBABILITY AND QUESTIONS OF CHEATING

Probability calculations are relevant to problems of evidence as to whether cheating has occurred. One form of cheating is copying from another. If two students taking the same 50-item or 100-item test submit papers which correspond exactly in the responses selected, is this evidence of cheating? The probability that two students will select by chance the same responses in a given test is the same as the probability that one student will select by chance the same responses as may be found on the instructor's key. As the above table indicates, the probability of these events is extremely small, so small as to render highly probable the explanation that they are due to causes other than chance. Provided the conditions stated in an earlier paragraph have been met, and subject to the considerations about to be discussed, the fairest assumption to make is that both of them have studied and really do know something about the subject.

Similarity between papers of two students, taken by itself, is not evidence of cheating. If the two students were sitting near each other, and if they were observed to be in apparent communication, then the resemblance between their papers is added cause for suspicion, but still not conclusive evidence. In order that it be conclusive evidence, a distinction must be made between similarity of correct answers and similarity of incorrect answers. Similarity of correct answers is never conclusive evidence of cheating, since there is always the possibility that the correct answers are the product of study.

Similarity of incorrect answers, or "identical errors" as they are often called, is a more serious matter, especially if there was observed evidence of communication, but perhaps even if there was no apparently possible means of communi-

cation. Assume that two students, as a result of genuine study, know the correct responses to all but ten of the items in a quintuple-choice test, and that they thus miss the same ten items. For each item there are four possible incorrect responses. The probability that the two students will select identical incorrect responses for the ten items by chance is about one in a million. Hence agreements of this sort are always grounds for suspicion, although they may not constitute proofs of dishonesty. Under such conditions any defense made by students under suspicion that their identical errors are due to chance is an extremely weak defense. On a true-false test identical errors are less conclusive, since there is only one incorrect response for each item, and since two students may be ignorant of the same material. Interpretation of identical errors in such a test may be aided by comparison with papers of other students, to discover whether the incorrect responses of the two suspected papers apply to items which are more frequently missed by the class as a whole.

The fact that identical errors have significance in connection with the problem of detecting cheating, whereas identical correct responses do not, was recognized soon after short-answer tests came into use. About ten years ago Henry F. Dickenson proposed a method for deciding under what circumstances identical errors can be charged to cheating.[1] His papers contain helpful suggestions for those who are interested in detecting cheating without accusing the innocent.

It may seem nonsense to suppose that an instructor will accuse students upon the basis of one identical answer, yet a colleague reports being so accused in an undergraduate course in (I regret to report) logic. Two students had studied together, and although during the test they were seated on opposite sides of a very large room, in answering one question they used the same rather unusual illustration. On this documentary basis alone, and without any checking of seating arrangements or other facts, the instructor was convinced that they had cheated. A similar case occurred at the graduate level when two students, close friends, wrote independently of each other the same symbols at the end of each essay answer. For both of them these symbols were intended as semi-humorous and abbreviated imitations, devised by them during their study together, for a comment often made by the instructor at the close of his own discussions. It was difficult for them to convince him that the identical use of the same symbols, unfamiliar to him, was not evidence that they had communicated during the test.

Nevertheless, identical errors and identical use of unusual words or phrases are grounds for tentative suspicion and further investigation. They may be made the basis for requiring a supplementary examination. The important thing is that teachers shall have some understanding of the logic of evidence, including the logical interpretation of mathematical statements of probability. Mathematical treatment of test scores promotes fairness on the part of the teacher by helping to eliminate prejudice and other forms of subjectivity. But logical errors may enter into such a process and thus bring about other unfairnesses in place of those which the methods are designed to prevent. An understanding of chance and probability as applied to choices will assist a teacher in more accurately diagnosing cheating and give him caution against unwarranted accusations.

[1]Henry F. Dickenson, "Identical Errors and Deception," *J. Ed. Res.*, 38 (Mar. 1945) 534–542; also "Identical Errors Reveal Deception," *Education*, 67 (Sept. 1946) 44–52.

ETHICAL IMPLICATIONS OF THE SOCIAL SCIENCES

BY ALFRED E. KUENZLI

THE DISTINCTION BETWEEN SCIENCE AS A SPECIFICATION OF WHAT IS AND PHILOSOPHY AS A CONCERN FOR WHAT SHOULD BE is a useful little scheme if one does not insist on using it as a weapon with which to bifurcate one's colleagues. Certainly the rule is not hard and fast because we do find philosophers who endeavor to describe a thing without reference to its consequences and because we find scientists who deliberately engage in research that is aimed at improving human welfare. Perhaps we should say that the essential scientific act, aside from its motivations and implications, is always an attempt to specify *what is* and that the philosophical enterprise is a concern for "fact" some of the time and for "value" some of the time. Or the philosopher can be concerned with relationships between fact and value, as when we speak of the ethical imperatives implied in research.

Humans have a curious penchant toward putting knowledge *to use*, be it for profit, for pleasure, for love or for war. Few will deny that this has been the case, at least, when it comes to findings from the physical sciences. Our ivory-towered chemist who smiles to himself: "Nobody will ever be able to use *this*" only lives to see his discovery come through his kitchen door as a component of a new way of food processing. Perhaps those persons are correct who hold that all science is value-involved, to a greater or lesser degree, and that the scientist's choices of subject matter and methods (since methods *do* influence outcomes) are, at bottom, ethical choices. Perhaps all science—physical, biological, social—is inextricably bound up in human welfare.

While the physical sciences have long since commanded attention and admiration in the public eye, particularly in the consciousness of the American businessman, the emergence of the social sciences as a force to be recognized and contended with is a relatively new phenomenon. These new disciplines, especially social psychology and cultural anthropology, promise to have even more pervasive social consequences than has been the case with physics and chemistry. This is, at least, our thesis. How really "pregnant" some of this new research is, in terms of the ideological struggle or in terms of political and educational policies, we have just begun to appreciate.

A Challenge to Bishop Sheen

As an example of the rising capacity of the social sciences to challenge current social practices and attitudes, particularly the tenets of traditional religion, we may consider one of the current sermonettes by the much-admired Bishop Fulton

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J. Sheen. In the following passage we sense the deep threat to the kind of moralistic approach which has been the forte of conventional Christianity:

> A boy is arrested for shooting another boy whom he has never seen, but does it on a "dare." The newspapers describe him as "delinquent" or "psychopathic" whereas a few generations ago, when Davy Crockett lived, the press would have called him "bad."
>
> There seems to be an insane dread of using moral terms, or even condemning anything on moral grounds. Psychological terms or the lingo of sociology, or even medical terms such as "complexes" are invoked with an air of scientific certitude, but "bad" or "good," "right" and "wrong" seem to be scrupulosuly avoided. . . .[1]

According to Catholic absolutism, right is right wherever you are—cultural anthropology notwithstanding. The priestly hierarchy discriminates the "white" acts from the "black" acts and any decline in the public mentality of this moralistic habituation profoundly threatens, clearly enough, the power of the hierarchy.

In terms of the ideological struggle, we can, at this point, sense the emerging dialectical onslaught between medieval dogma and the "enlightenment" which is heralded by the new sociology and psychology. In this struggle, religious dogmatists (of whatever sort) come armed with revelation and tradition. They ask us to believe, to have faith, to place our trust in powers that lie beyond the scope of human reason. The social scientists, on the other hand, bring their attitude questionnaires, computing machines, and experimental laboratories. They affirm the intelligibility of the social world and ask us to observe, discuss, and consider.

From conventional Christianity comes an emphasis on the moral condemnation of an act and its retribution. From the social sciences, on the other hand, now comes an emphasis on the causal analysis of an act and its correction. These rival orientations present rather clear-cut sets of alternatives as to how we should view and handle social problems—especially the problem of deliquency and crime.

The power of the social scientist lies in his ability to demonstrate, in concrete cases, the failure of traditional religious views and practices to give adequate guidance in the delinquency, criminology, and mental health fields. Not only can this case be demonstrated but even more severe challenges to religious fundamentalism begin to take shape as correlations come in with regard to prejudice, authoritarianism, ethnocentrism, sexual frigidity, marital conflict, some types of psychosis, and perhaps even war.[2] How shall traditional religion handle the gradually developing documentation that, on the negative side of the ledger, the long-cultivated attitudes of self-righteousness have tended to be seriously disruptive to human solidarity and happiness?

The Unitarian, Sophia Fahs, expresses the psychological importance of the kinds of religious beliefs we impart to children:

> "Some beliefs are like pleasant gardens with high walls around them.
> They encourage exclusiveness, and the feeling of being especially privileged.
> Other beliefs are expansive and lead the way into wider and deeper sympathies.

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[1] Fulton J. Sheen, syndicated newspaper column, August 20, 1955.

[2] *Cf.* T. W. Adorno, *et. al.*, *The Authoritarian Personality* (New York: Harper and Bros.), 1950.

Some beliefs are like shadows, darkening children's days with fears of unknown calamities.
Other beliefs are like the sunshine, blessing children with the warmth of happiness.
Some beliefs are divisive, separating the saved from the unsaved, friends from enemies.
Other beliefs are bonds in a universal brotherhood, where sincere differences beautify the pattern.
Some beliefs are rigid, like the body of death, impotent in a changing world.
Other beliefs are pliable, like the young sapling, ever growing with the upward thrust of life. . . ."[3]

Two types of religious education are contrasted by Mrs. Fahs. For some children, beliefs are *given* to an individual by an authority other than himself and are thus "truths" to be understood, appreciated, and accepted. For other children, beliefs regarding the universe and man's destiny in it are the product of maturing emotional experiences, meditation and critical thought and are not assumptions with which to begin.[4]

It is argued that children whose attitudes grow out of their developing experiences are on more solid psychological ground than are those whose beliefs come uncritically from a traditionalistic source. For example, the eight-year-old boy who, because of biblical teachings, anticipates being able to walk on the water at the summer swimming place is in for a devastating disillusionment and an emotional shock when his experience does not conform to his expectations.[5]

THE SUPREME COURT DECISION

One of the most dramatic demonstrations of the ethical potency of the social sciences is the recent Supreme Court decision on desegregation in the public schools. In social science circles, this decision has been called a "Ken Clark law" for it was, to a large measure, brought about by the research and communicative efforts of the respected Negro psychologist, Kenneth B. Clark, who worked closely with the attorneys in the preparation of the brief which was submitted by the National Association for the Advancement of Colored People. This presentation contained an appendix, endorsed by thirty-two sociologists, psychologists, and psychiatrists, entitled: "The Effects of Segregation and the Consequences of Desegregation: A Social Science Statement." Clark, who has himself made studies of the effects of discrimination on the personality development of minority-group children, points out that one of the ways in which the Supreme Court decision is momentous is that, for the first time in history, psychological evidence was admitted into a court of law as part of the basis on which a great ethical judgement could be made.

"In view of the fact that a systematic and empirical approach to the study of society is relatively new and the fact that legal arguments and decisions depend to such a large extent on precedent, the introduction of social science testimony in these cases was an extension of the legal frontiers." Clark points out further

[3]Sophia L. Fahs, *Today's Children and Yesterday's Heritage: A Philosophy of Creative Religious Development* (Boston: Beacon Press, 1952), p. 14.
[4]*Ibid.*, pp. 15–16.
[5]*Ibid.*, pp. 11–12.

that there was an understandable concern on the part of some of the lawyers about whether this type of evidence would be admissiable in the courts and how it would be evaluated within the usual framework of legal procedure. It was largely because of the foresight of Thurgood Marshall, Robert L. Carter, and other NAACP attorneys, because of their recognition of the need for this type of evidence and their courage in pushing forward the frontiers of legal precedence by making use of this evidence, that the social sciences were able to play a direct part in the resolution of a pressing social problem.[6]

Of course not all topics of social research are as "loaded" with ethical implications as has been this area of prejudice and discrimination. Nor does social science knowledge always pass this happily into action and practical consequences. Seemingly most Americans have stronger identifications with other ideological sources—religion, family, political party, social club, or professional society. One does not find many citizens for whom the social sciences are a strong, positive "reference group." While it is true that Dr. Benjamin Spock's *Pocket Book of Baby and Child Care* has sold upwards of five million copies, this fact in itself is not a negation. Certainly one does not find college freshmen already attuned to psychological and sociological habits of mind. "Permissiveness" is as much of an issue today as "evolution" was yesterday. In fact a Darwinian, in either biology or psychology, still finds deep resistance among many of those in his audience who come fresh from the streets of society.

How Militant Shall We Be?

Our thesis is the emergence, in American society, of the social sciences as an ideological and ethical force to be contended with. These new disciplines, unless they are curtailed by totalitarian influences, promise to challenge nearly every tenet, every maxim, every practice of our traditional morality. Indeed these disciplines almost imply "a morality to end all moralities" by their focus on the causal analysis of an act rather than upon its classification as to "badness" or "goodness."

To the scientist, the behavior of the deviant or rebellious child comes about because of the factors that exist in the situation. Understand these factors, these *causes*, and one is in a position to change the behavior. For the correctionist—in the penal institution, the psychological clinic, the home, the school—this is the knowledge that is necessary. To further classify behavior into "white" acts and "black" acts, in Bishop Sheen's sense, both goes beyond science and is superflouous to the case. In fact, for the psychological counselor, it is precisely the moral condemnation of an act which he strives to avoid.[7]

There is yet this question: To what extent should the social sciences become militant in propagating their findings and frame of reference? In a democratic society, how far should these disciplines go in trying to change prevailing ideologies and norms? This is the difficult ethical question which has been posed, especially to social scientists engaged in action research on the desegregation problem.

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[6]Kenneth B. Clark, "Desegregation: An Appraisal of the Evidence," *Journal of Social Issues*, 1953, 9: 4, 6–8.

[7]*Cf.* Carl R. Rogers, *Counseling and Psychotherapy* (Boston: Houghton Mifflin Co.), 1942.

After a considerable amount of deliberation and "soul-searching," this writer, for one, is ready to conclude that the social sciences need to become just as militant as they possibly can be. They cannot coerce, propagandize, or indoctrinate. For to do so would be to succumb to the kinds of autocratic practices which they, on both empirical and ethical grounds, tend to oppose. But the social scientist must make his case just as powerfully as is done by other ideological groupings in society. Once he has made it, as cogently as he can, he must place it into open competition in the "market place of ideas." To do less would be an act of self-depreciation.

The social science case rests not upon indoctrination, nor upon nonrational faith, nor upon supernatural sanction. It rests on factual documentation, rational analysis, and causal explanation. In reply to the Jesuit who argues, on supernatural grounds, for the "authority of the father" and the docility of children, documentation can be brought to bear to show not only that the emancipation of women is a fact not likely to be reversed but also that the participation of children tends to make, in the concrete case, for a reduction of family hostilities and tensions.

To those who argue for autocracy in political and educational structure, the experimental work of Lewin and others can be cited to show that democratic types of leadership and group organization do actually bring about greater productivity and creativity at the same time that they produce interpersonal harmony.[8]

To those who argue for the "economic man" of either Adam Smith or Karl Marx, the industrial research of Mayo and others can be cited to show that fundamental forces are friendliness and attitudes of regard for oneself and others.[9]

To one's students, one can be ideologically militant enough to show that the findings of John Dewey and Kurt Lewin and Carl Rogers and Elton Mayo go together to form a consistent system of ideas stressing democratic cooperation and intelligent self-direction. Such a system, they can come to know, is but one of the frameworks existing within the social sciences, and within society, which aims to provide guidance and direction for the successful conduct of human affairs. One's students can come to discover the ideological alternatives available at any moment in the drama of history and can come to choose, as relatively free and rational beings, what forces shall compel them to belief and action.

[8]Kurt Lewin, *Resolving Social Conflicts* (New York: Harper and Bros., 1948), pp. 74–83.
[9]"The Fruitful Errors of Elton Mayo," *Fortune*, November 1946.

A NOTE ON THE "COMMON"

BY RONALD LEVY

IT IS PATENTLY SAID THAT DEMOCRACY puts its faith in the integrity and intellectual ability of the "Common Man". We assert that the common man can be honest, diligent, and faithful, and will under the proper conditions, perform up to these capabilities. We also say that he has the inherent ability to learn as well as anyone else. From this combination of qualities we expect to emerge a being who can be taught to make those choices which will lead continuously to more enriched living, and who also will have the character structure and motivation to "live up" to such choices; i.e., who will act consistently with respect to such choices when made.

Our job in a democracy is then twofold: first, to seek for those conditions under which the common man can perform up to the above capabilities, and second, to devise methods for training him in the disciplines of everyday normative living.

Educators, philosophers, academicians, etc., who make an evaluation such as the above often choose it as the seat of all value in democracy, and consider that those who subscribe to it will (a) fully understand each other and, (b) be able to work together towards this goal. In such a statement I see, however, a grave semantical pitfall. It lies in the fact that there are two meanings of the word "common" which, while genetically identical, are functionally diametrically opposed.

The first meaning has two manifestations. In the first place, "common" originally referred to "that which pertained to *the* community" and has, I believe, carried that denotation down to the present day. It is the various connotations of the word which are functionally dangerous. One does not usually specify what "*the* community" is to which this "common" pertains. In general there are two implicit referents which this word may have in popular use. For the large land owners, such as inhabited the South before the Civil War, any community larger or more inclusive than their immediate families, was not only dangerous, but also undesirable. The "common" for such a person, was associated with the negro slaves and "white trash" who, owning no land at all, *had* to live in a *common* place. Such a place, being often dirty and ill-kept, added its qualities to the connotative value of the word. It was, then, and still is for many today, at least a derogatory term, if not one of contempt. For such people then, the inclusion of themselves in a group representative of the "common man" would be a situation of greatest opprobrium. They would never use such a term to apply to themselves, and did they subscribe to a belief in democracy, would place its values elsewhere.

The other manifestation is found implicitly in use by those who apply the term "common man" to a limited group to which they themselves belong, but which excludes some other group or groups; such exclusion depending on the

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character of the self-designated "commoners". For some such groups the "common man" must be an American, at least native born; for others he must be a white Protestant; while still others would make him a business man, farmer, professional man, or laborer. In any case, he must be like *they* are, and such a device (the label "Common Man") serves to locate the values both of democracy and of this world, in themselves and their kind. It labels their actions as good, and it becomes at best a rationalization for what they want to do regardless of the effect on others. It is therefore productive of no improvement in intergroup relations.

Diametrically opposed to both of the above nominalistic meanings of the word "common", is the realistic meaning, which is, to me, the more productive way of looking at the term. Such a term applied in the expression "the common man", becomes the embodiment of the belief in a community composed of all humans. This community is a community by reason of an inherent relationship between its individual members. Furthermore this community is neither created nor selected by one or more of its members. The members are, in a very real sense, created by it. They gain their individuality and self-consciousness only in so far as they are actively participating members in this largest and most basic of all communities. A belief in *this* "common man" is then a belief that the most necessary property in all men is an inherent relationship potentially binding them together into a community. It is only in so far as this potential community is actualized that men can have the continuously enriched living so cherished by democracy. It is in such a sense, I believe, that democracy can be fruitfully said to put its faith in the "common man".

CONCERNING THE ABANDONMENT OF A CERTAIN "DEWYAN" CONCEPTION OF METAPHYSICS (*From page 27*)

not open to scientific inquiry but as valid as any subject-matter of the sciences. Mr. Hofstadter has not made such a demonstration. Indeed, he does acknowledge his failure even to begin to work systematically at a general theory of the involvements of things. In fact, he admits to not having stated either cases of involvement or an analysis of the term—only suggesting a need for these statements.[30] But such a need has been suggested before—dating back prior to the introduction of the term "metaphysics" itself.

On the basis of our analysis and our criteria for discussing the question raised, we propose the abandonment of the 'Deweyan' conception of metaphysics constructed by Mr. Hofstadter. To Mr. Hofstadter's efforts, we address a convenient paraphrase, reconstructed from Dewey's letter to Professor Albert G. A. Balz. "There is . . . no disrespect in the . . . fact that you read what was actually written in the context of connection with the conduct of *inquiry* as if it were written in" a metaphysical context (Dewey said, at this point, "an ontological context"—but we will not go that far); especially as this latter context is classic, in comparison with which that set forth in . . . *Theory of Inquiry* is an upstart."[31]

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[30] *Ibid.*, p. 270.

[31] Balz, Albert G. A. and Dewey, John. "A Letter to Mr. Dewey Concerning John Dewey's Doctrine of Possibilities, Published Together With His Reply." *The Journal of Philosophy*, XLVI, 26 May 1949, pp. 313–329.

BOOK REVIEWS

TEACHING HIGH SCHOOL SOCIAL STUDIES. By Maurice P. Hunt and Lawrence E. Metcalf. New York: Harper and Brothers, 1955. 471 pages. $4.50.

This book is more than another textbook on methods of teaching the social studies. The rigor of thinking and scholarship which characterize it and the clarity of its directive to social studies teachers make it an important contribution to the literature of American education. It will have an enduring influence on the field with which it deals.

The key to its effectiveness derives from the fact that the authors resist the temptation to seek short-cuts to the promised land of "how to do it."

They frankly acknowledge their indebtedness to the creative and provocative tradition of American pragmatism and related movements in social and psychological theory. They never lose contact with their theoretical base as they systematically develop their case for what should be the central task and method for teachers of the social studies. The freshness and vigor of treatment bears evidence to the fact that while the authors have been inspired by thinkers in one of the great American intellectual traditions they have made it their own and have developed their own creative interpretations and extensions.

The central thesis, which is steadily operative throughout, is set forth in the opening chapter. It is derived from an integrated analysis of our cultural condition, the values of a democratic philosophy, and theories of human learning.

It is maintained that the American culture, encompassing a series of competing heritages, is shot through with a dangerous amount of conflict which has been accentuated by an accelerated rate of change during the past century. Moreover ". . . it is assumed that, if a democratic society is to survive, there will be general agreement among its members as to central values. While peripheral values may remain in flux, a democracy is in peril if its citizens cannot agree on an operational meaning of core values such as the dignity and worth of individuals, the method of intelligence, and political freedom. If such agreement is impossible, conflicts between individuals and groups and disintegration of personalities are likely to reach unmanageable proportions." (p. 10) The problem is complicated by the fact that where conflicts are sharpest there often exist *closed areas* of belief and behavior which are largely shut off from rational thought.

An urgent task of American education is to help the American people find consensus in their central values. The means used are important because they determine whether society will move in authoritarian or democratic directions. Uncritical transmission of a heritage which, in fact, consists of a series of competing heritages, merely serves to intensify conflict. The alternative task for education in a democracy is a "creative resolution of conflict" where those who differ, achieve 'third alternatives', that is, new positions which, although perhaps to some degree compromises of competing outlooks, also include genuinely new values which effectively erase conflict and place life on a level of deeper insight . . . .

". . . The chief role of education in a democracy is intelligent or critical transmission of cultural heritages, during the course of which disagreements among individuals and incompatibilities in personal outlook are exposed and resolved creatively." (p. 11)

With the thesis so established the remainder of the book is devoted to a scholarly and penetrating extension of it as applied to problems of relevance for those who teach the social studies—both at the level of fundamental theory and practical application. There is, for example: a refreshing treatment of the reflective method; an enlightening analysis of the central issue between "associationist" and "interactionist" or "field" theories of learning, with a clarification of the implications for teaching which is superior to those found in most books on educational psychology; and a thought-provoking treatment of the application of the reflective method to value choices. The chapter devoted to the last-mentioned item is the clearest treatment of the subject this reviewer has seen in print.

The prime obligation of the teacher of the social studies is stated without equivocation: It is to promote the rigorous, disciplined process of reflective thinking. The book gives the lie to those recent critics who have been loudly proclaiming that the Dewey philosophy breeds anti-intellectualism and advocates "letting them do as they please".

"Whether or not students want to think, a teacher must be an instigator of thought. If they want to, the job is easier; if they don't, a teacher has to arouse the desire to think. Whether or not students want to study the critical social issues, a teacher must see that, to the best of their ability, they do." (p. 155) The authors go beyond the usual clichés about promoting reflective thinking and spell out the concrete operations which teachers and learners perform in the act of reflective thought. Specific techniques are explained and elaborated. In line with the central thesis, concrete suggestions are made for the appraisal of instructional materials and methods of evaluation in relation to the reflective process.

Pursuing the thesis that "the foremost aim of instruction in high school social studies is to help students examine reflectively issues in the closed areas of American culture," it is argued that teaching materials should be drawn from "(1) broadly social and highly controversial issues of the culture; (2) knowledges, values, and attitudes of students; and (3) relevant data of the social sciences." (p. 223) The implications of this position are explored for both core and subject-centered approaches to curriculum construction.

The style is clear and forthright. It is written for real teachers and schools, not for idealized dream schools created by the imagination of the authors. Tricky issues which usually get ducked are met head on, for example, "How to Live with Administratively Imposed Ground Covering."

Finally, since the critical, reflective approach advocated is bound to draw the opposition of those committed to the preservation of the "closed areas", the authors deal with the principles and tactics of building and maintaining genuine and responsible academic freedom in the schools.

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THE USE OF RESOURCES IN EDUCATION. By Elsie Ripley Clapp, with Introduction by John Dewey. New York: Harper and Brothers. A Publication of the John Dewey Society. 334 pages.

This book is a recounting with meticulous care of what went on in two schools, or perhaps better said, what went on in two communities. Some might perhaps designate these activities as experiments, but they were not experiments in the sense that there was a statistical summation of result. It would be better to say that here we have what seems to be a faithful description of what went on over a considerable period of time in two rather widely separated communities.

One of these schools was in an agricultural area in Kentucky, one in a mining district in West Virginia. The two communities were decidedly different in resource, and in the skills, understandings and aspirations of the people, but it was found that the procedure could be the same; namely, first, study and understand the people, second, study and understand the available resource materials, third, bring the two together so that the latter may serve the purpose of bringing about a better development of the former.

The title of the book is "The Use of Resources in Education", but from what was said in the preceding paragraph it is evident that this does not represent the whole story. It is true that effective use was made of resources, both material and historical, historical even back to the Stone Age, but this was not all, at least not all if the connation be given to the word "resources." For a very careful study of the people themselves was made; their social habits and traditions, their economic status, their skills or lack of them, their aspirations and ambitions, etc. "We felt at first that we were in a world that we had never known before and for a time we just absorbed what we saw and met, although its meaning was far from clear to us. Then we set out to comprehend, if we could, the life around us and to become better acquainted with the place and the people among whom we had come to live and work." The care with which this was done especially *BEFORE* school started is one of the most striking features of the work.

The book is a publication of the John Dewey Society. It would be surprising, therefore, if its contents did not exemplify the points of view of this eminent educational philosopher. Dewey himself wrote an introduction to the book and any review thereof would be incomplete without the following quotation from this introduction: "Miss Clapp has not only given a full, vivid, and convincing description of the practical phases of the work, what was done and how; she has also given a clear and illuminating interpretation of its theoretical content and meaning: the purposes that inspired it, the leading principles that guided it, the educational philosophy of which it is an expression and embodiment."

It is hard to say anything more or better. The reviewer has for many years been a student—and teacher—of Dewey's own philosophy, and he can safely say that nowhere else has he found a better expression of this philosophy than that portrayed in this volume by Miss Clapp and her helpers. And yet it was not at any time their purpose to portray any theory or philosophy of Dewey's or anybody else's. Their first, last and all the time purpose was to make a good school and community, and if any preconceived theory got in the way, so much the worse for the theory. Above all they were not trying to *prove* anything. As a matter of fact, as they worked from day to day they found their initial ideas and theories changing. It seems that it was literally true that as the theories which they had to begin with did something to and for their school activities—by giving

direction to them—these same procedures were in turn doing something to their theories, by changing or refining them. And this is as it should be. Dewey is said to have remarked when in the 90's he established his now famous school at the University of Chicago, that he was not setting it up to demonstrate a philosophy, but rather that out of the tested activities of the school a valid philosophy might arise. Anyone who would like to see this kind of interaction between theory and practice going on may well read this book.

In summary, a general description of the book may well be as follows: This is an account of how a few teachers of whom the author was leader studied a community—be it said an expanding community, first, a small community within a county, then a county within a state, state within a nation, etc.—its people and its resources, and how the latter were used for the developments of the former, in short, how to make a good school. It would be difficult to see how any one could say that these were not good schools or that this is not a good book.

JAMES W. NORMAN

EXISTENCE, CAUSATION, AND INTELLIGENCE

(*Continued from page 43*)

I would like to close by making a distinct break and stating, without support, three educational implications of the philosophic position which I have indicated. On other occasions I have presented them with both elaboration and support. Their inclusion at this point, even though brief, seems desirable to round out the picture which I have been trying to paint. They are as follows:

1. If a value-system is taken to be man-made, the formulation of an educational program requires clear and careful delineation of assumptions regarding the mores, or the group-outlook, in which the program is to take place. In this nation, democracy is presumably a vital aspect of such, and to fail to define democracy with clarity and precision is to doom any program to vagueness and futility. In other places, we have shown why we find that democracy should be defined as equality of opportunity to participate in decision making and equality of obligation to carry out the decisions.

2. If the scientific way of developing insights is to be taken as the one which assumes precedence over all others, then the insights which are to be developed in the minds of school children are to be criticized and guided on the basis of the scientific criteria for determining truth—adequacy and harmony of conclusions (or insights) in light of obtainable data. On this basis, criticism can be democratic because *all* participants—teachers and pupils alike—are bound to stand criticism on the basis of democratically adopted criteria, with no special privilege because of rank or status of participants.

3. The procedure and purpose of democratic education then become a matter of encouraging and assisting students to conduct reflective-scientific studies of problems which represent not only inadequacies but also disharmonies, incompatibilities, or self-contradictions in life outlook, leading toward enhanced and more harmonious outlooks and heightened capacity to reconstruct outlooks independently.

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